The Effect of Managers' Clarification of Business Linkage of Training on Trainees' Transfer of Training

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THE EFFECT OF MANAGERS' CLARIFICATION OF BUSINESS LINKAGE OF TRAINING ON TRAINEE'S TRANSFER OF TRAINING

by

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THE EFFECT OF MANAGERS’ CLARIFICATION OF BUSINESS LINKAGE OF TRAINING ON TRAINEE’S TRANSFER OF TRAINING

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This study investigated the hypotheses that if managers were engaged in specific activities aimed at increasing their understanding of the linkage of employee training to business goals, then they would in turn create a more positive transfer environment, resulting in greater transfer of training received by their employees. Some managers of trainees participated in a workshop in which they used an “impact mapping” procedure to clearly explain the relationship between training of their employees and strategic goals of the business; another group of managers did not receive this impact mapping training. Then, all managers’ employees participated in a supervisory training program. Following the supervisory training, the two groups of supervisors, those whose managers received impact map training and those who did not, were compared to ascertain any differences in rate of transfer of training.

Four primary variables were assessed: (1) the extent to which managers self-reported taking specific actions to create a supportive transfer environment, (2) managers’ observations of trainee usage of new learning, (3) trainees’ observations of actions taken by their managers to create a positive transfer environment, and (4) trainees’ self-report of training transfer.

Overall differences were found between the experimental and comparison groups of managers in both their self-reports of actions toward creating a supportive transfer environment and their reported observations of trainees’ usage of new skills.
on the job. There was failure to find predicted differences between the experimental and comparison groups of trainees' observations of actions taken by their managers to create a positive transfer environment and the trainees' self-report of training transfer. However, those trainees who reported more actions by their managers to create a positive transfer environment also were reported by their managers to have greater transfer of the training, and vice versa.

The findings suggest the importance of managers and trainees linking training to corporate goals, the positive consequences of building a supportive transfer environment, and the value of training managers to support the transfer efforts of their trainees.
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DEDICATION

To my father and mother, Clarence (deceased, 1996) and Margie Benanzer, who both left school at the early age of 16 to assist financially in the support of their siblings, and who provided me with a solid work ethic, inspiration to achieve, and loving support.

To my brothers and sisters (Mary, John, Rose, Jane, Ed, Irene, Connie, Andy, and Chuck), my future son-in-law, Jason Karas, and my sisters- and brothers-in-law (Jane, John, Ted, Michelle, and Cassie) whose prayers and encouraging words kept me going.

Finally, and most importantly . . .

To my loving daughter, Claire Sparklin, whose sense of humor kept me from taking myself too seriously, who was understanding when I was not available to do "mom things," and whose spiritual outlook reminded me often that someone other than myself was in control.
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Many people, too numerous to mention, contributed greatly to support the completion of this research. To all of them, I am most thankful.

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CHAPTER I

INTRODUCTION

Statement of Problem

The American workplace has changed drastically over the past decade with an unsurpassed technological escalation demanding that workers be trained to embrace the new information age with upgraded skills (Carnevale, 1991). Not only does the modern day worker need to be taught the new skills but the trainee has to be able to apply the new information to the job. It is imperative that the training taught in the classroom be transferred to the work environment in a most expedient and efficient manner. Brinkerhoff and Gill (1992), in their book The Learning Alliance, state, "...training is central to organizational transformation and to sustaining competitive advantage" (p. 6). Companies no longer have the luxury to train just for the sake of training; their survival depends on the workers' ability to be critical thinkers and to do the job in a highly technical, flexible environment.

In order for training to be effective and to have a pay off for the company, employees need to be able to use the learning obtained from the training sessions in their work place environment. With the technological changes and the present day, highly competitive business climate, this transfer of training or the extent to which learning is applied in the work setting, is key to the success of businesses.

A number of studies have been conducted on strategies to facilitate transfer of training, for example, Baldwin and Ford (1988); Hicks and Klimoski (1987);
Huczynski and Lewis (1980); Wexley and Baldwin (1986); Ford, Quinones, Sego, and Sorra (1992); and Facteau, Dobbins, Russell, Ladd, and Kudisch (1995). The current literature on transferability of classroom training to the work environment stresses the need for all company employees, and particularly the managers of trainees, to be more involved in the total training experience (before, during, and after training) rather than delegating the training responsibility solely to HRD and letting them “fix the problem.” Assistance of the managers in creating a positive work environment, including what proceeds and follows the training intervention, plays a major role in the trainees’ ability to utilize the new skills in the work setting (Georgenson, 1982; Robinson & Robinson, 1989; Tracey, Tannenbaum & Kavanagh, 1995).

In addition to the manager’s role in creating a better environment for transfer, some companies such as Motorola, Corning Glass Works, AT&T, and Gilroy Foods stress how the training links to the company’s strategic direction and what effect that has on the transferability of training from the classroom to the work setting. These companies, and others like them, take not only a more active role in what goes on before, during and after the training, but also encourage employees to connect the training they receive with the company’s goals and strategic direction (Casner-Lotto & Associates, 1988).

The link between training and company goals helps trainees to understand that the real purpose of learning new skills is for them to do a better job and, thus, impact goal attainment and profit margin. When training is in alignment with the strategic direction of the organization, the employee will, hopefully, utilize the new information within the boundaries of the actual work environment, creating greater transfer of the knowledge.
However, the majority of manufacturers do not help employees see the relationship of how skills learned in the classroom connect to the overall strategic direction of the company; even though the newly learned knowledge could be easily translated into the company’s goals, effect procedures for producing a more positive transfer environment, and create greater measures of success (Bennis & Nanus, 1985).

In summation, the increased technology in the industrial setting has impacted the need for workers’ skills to be upgraded and for the new knowledge to be optimally used in, or transferred to, the work setting. Presumably, managers’ action in creating a supportive environment for the transferability of skills and alignment of training skills to the organizational goals influences the usage of the training in the work setting. Therefore, current trends in the training and development arena, call for further research into the problem of transfer of training, the transfer environment, and the alignment of training to organizational goals.

Purpose of Study

The purpose of this study was to investigate the hypotheses that if managers were engaged in specific activities aimed at increasing their understanding of the linkage of employee training to business goals, then they would in turn create a more positive transfer environment, resulting in greater transfer of training received by their employees. The researcher wanted to know if the managers’ actions created a more supportive transfer environment, and if the trainees engaged in more usage of training, depending on their managers participation in the Impact Map workshop of aligning training with the strategic direction of the company.
More specifically, this study proposed that a more supportive training environment could be created and, thus, induce more usage of training in the work setting, by teaching managers of the Frontline Leadership trainees to (a) understand the relationship between employee training and company strategic direction, (b) inform their trainees about this specific relationship between the training they receive in the classroom and the company goals, and (c) exhibit an interest in what happens after the training so that the transfer of training would be greater than if managers had not received the goal/training connection.

The emphasis of this study is not on the traditional transfer-of-learning research based on instructional design's impact on classroom education. Its focus is on the management practices that take place before, during, and after training, within the work setting of the adult learner on the manufacturing floor of corporate America; and the alignment training with the strategic business goals.

The main aspects of this study, managers' actions in supporting transfer of training, usage of training, and alignment of training with company goals, have had very little research compiled on the combination. A modest amount of empirical evidence is available about the relationship, but to the best of the researcher's knowledge none of the research was conducted in a manufacturing setting. Therefore, the main concern of the present study is to provide empirical evidence of the relationship between managers' actions, usage of training, and linking training to business goals by studying a specific supervisory training program at three manufacturing companies in Michigan. The two key training constituencies that participated in the study were first-line supervisors and their managers from the manufacturing companies.
Conceptual Basis and Importance of Study

One way to assist in the transfer of information from classroom to shop floor is for managers to play a more integral role in helping employees to see how the training will, not only assist them with their own immediate job, but, also how the training is linked to the company's goals and objectives for the long term success of the business. In other words, managers who let trainees know "why" they are being trained and how this training relates to the overall company strategic plan are an important component of training. This broader view of training is a paradigm shift to a systems approach of training. It gives consideration to the happenings before, during, and after the training event that assist in not only obtaining new information and skills but also in the transfer of the new knowledge to the workplace (Gill, 1995).

Even though some employers recognize this shift toward a holistic approach to training by paying attention to what goes on before, during and after the training intervention, in practicality, few manufacturers implement the systems approach to training. Many trainees are not told in advance when training is scheduled, how the training attributes to their current job or why they are even being trained, let alone how the training links to the overall direction of the company's goals. After the training is conducted little interest is shown on the part of the supervisor. They rarely inquire about what was learned and how it is being implemented in the trainee's everyday work life. This indifferent approach costs business because it hinders the transfer of training (Broad, 1982). In most instances, the only portion of the systems approach to training to materialize is that which takes place in the classroom, ignoring the before, during, and after support.
After conducting his research on practices to support the transfer of training and the alignment of training with the strategic direction of the organization, Max Montesino (1995) found that there was (a) a low-to-moderate positive correlation between the perceived alignment of training with the strategic direction the organization and the presence of practices to support transfer of training, and (b) a positive correlation between awareness of the strategic direction of the organization and commitment to that strategic direction for both trainees and managers. “The group of trainees that reported very-high transfer of training, perceived significantly higher alignment of the training program with the strategic direction of the organization than the group of trainees that reported low-to-high transfer of training” (p. 104), concluded Montesino. His findings showed the importance of linking training to the strategic goals of the organization and building partnerships of support between managers and trainees to enhance the transfer of training. He recommend that further investigation be conducted in various settings regarding the relationship between the transfer of training and organizational strategy. This study hoped to add to the body of research centering around transfer environment, transfer of training, and alignment of training to organizational strategy.

According to a recent survey on training and development trends, it was found that even though training executives place a high priority on aligning training to core business goals, the business leaders think that employees do not fully understand the mission and business of the company (Bassi, Benson, & Cheney, 1996). The results of the study are another indication that more research is needed on the topic of training and alignment of company goals.

Conventional wisdom supports the need for companies to have a well trained workforce that impacts on companies abilities to meet their strategic and economic
goals. The survival of U.S. manufacturing is dependent upon skilled workers to sustain their foothold in the world economy (Gordon, 1993). Companies are struggling to keep pace with the ever expanding technology boom of the last few decades. The only way for them to effectively remain competitive and achieve their financial goals is to upgrade the skills of their workers to meet the demand of the high scale technology needs (Commission on the Skills of the American Workforce, 1990; Jacobs, 1992; Puckett, 1995). Employees at all levels need a variety of skills including: higher levels of math, technical reading, ability to operate computers, robots, and computerized machinery and being able to work together in teams. As a result of the factory modernization workers are being asked to do things they have never been required to do before. Many do not have the skills to do the job (Special House Committee on Workforce Readiness, 1992). Therefore, companies find themselves needing to upgrade the skills of their current workforce and when hiring new workers to train them in the ways of doing business in the 21st century. By assisting companies in creating a more supportive transfer environment, one that allows trainees to use more of the classroom taught skills on the shop floor, human resource developers and community college customized trainers can show how training impacts the company’s production and financial bottom line.

This study of transfer environment and transfer of training was an attempt to increase the body of information in the domain of aligning training to company goals, training managers to help in creating a supportive transfer environment and increasing the transfer of training. Two outcome questions were asked:

1. Was the transfer climate better for those trainees whose managers received a session in Impact Mapping?
2. Was the transfer of training greater for those trainees whose managers attended an Impact Map Workshop?

The independent variable was managers' understanding of the linkage of employee training to business goals (Impact Mapping). The dependent variables were (a) managers' and trainees' reports of the transfer environment created by the managers, and (b) managers' and trainees' reports of the transfer of training by the trainees.

Research Hypotheses

This research study hoped to demonstrate that (a) managers who were trained in developing an Impact Map, linking training with company goals, would create a more supportive transfer environment, and (b) their trainees would report greater transfer of classroom instruction to the work place.

A control-group design experiment was conducted and the following conceptual hypotheses were investigated:

1. There will be a higher mean score on the experimental group of managers' self-report of environment support actions than on the self-report scores for the comparison group of managers.

2. There will be a higher mean score on the experimental group of trainees' report of managers' environment support actions than on the score for the comparison group of trainees.

3. There will be a higher mean score on the experimental group of managers' report of trainees' usage of training than the score of the comparison group of managers.
4. There will be a higher mean score on the experimental group of trainees' self-report of usage of training than the self-report score of the comparison group of trainees.

5. There is a positive relationship between the mean of trainees' report of managers' environment support actions and the mean of managers' self-report of transfer support actions.

6. There is a positive correlation between the mean of trainees' self-report of usage of training and the mean of managers' report of trainees' usage of training.

Design of Study

The basic design for this study was experimental. Three companies in Michigan requested Frontline Leadership training for their first-line supervisors from the local community college.

Before the Frontline Leadership, supervisory training was delivered to a group of 10–15 employees from each of the companies; the managers of each of the trainees were identified. Half of the managers were randomly selected, becoming Group A, and were given no treatment. The other half of the managers, or Group B, were given an Impact Map treatment, linking training objectives to the business plan, and were told to share the linkage information with their trainees. The design process was repeated at each of the three companies.

Four weeks after the Frontline Leadership was completed surveys were mailed to the study participants and included the Trainees' Self-Report of Transfer of Training, Trainees' Report of the Transfer Environment, Managers' Report of Transfer of Training, Managers' Report of the Transfer Environment, and Predisposition to Training. A comparison was made between the reports from
managers and trainees whose managers attended the Impact Mapping workshop (Experimental Group B) and reports from managers and trainees whose managers did not attend (Comparison Group A). The transfer environment and the training usage were measured.

Definition of Terms

Provided below are definitions for those terms that are system language words used within the domain of training and development research.

Transferability: In this study, the ability of an employee to effectively bridge or apply newly learned skills to the work setting by producing significant behavioral changes in that environment is the operational definition of transferability (Baldwin & Ford, 1988; Leifer & Newstrom, 1980; Tannenbaum & Yukl, 1992).

Total Training Process: The total training process focuses on training from a holistic or systemic approach. Viewing training from its totality of activities, meaning before, during, and after the training event and accepting the interrelationship of a number of components within an organization dealing with training, takes a broader prospective of the training process (Brinkerhoff & Gill, 1994; Broad & Newstrom, 1992; Robinson & Robinson, 1989).

Positive Transfer Environment: A positive transfer environment refers to (a) the aspects or actions which encourage employees to use what has been learned in training (i.e., setting learning goals with immediate supervisor before training begins, prevention of work related interruptions during training, released time to work on implementing new behaviors), and (b) the extent to which an employee is rewarded for new behaviors (i.e., promotion, positive feedback, recognition) (Noe, 1986; Rouillier & Goldstein, 1991).
**Impact Mapping**: The process of Impact Mapping is a specific procedure used to clarify and explicate the relationship between training to be conducted or received and the strategic and tactical goals of the business in which the training is being given (Brinkerhoff & Gill, 1994).

**Limitations**

This study was limited to the target population within the organizations where the study was conducted (first-line supervisors in the Frontline Leadership class and their respective managers, in three manufacturing companies in Michigan). Although the researcher was able to generalize from the sample to the population studied, the findings of this study refer to the population within the organizations studied, not necessarily to all manufacturers in the automotive parts and cereal producing industries. The ability to generalize the results of the study beyond the three organizations is limited.

Conclusions concerning positive transfer environment are limited to the manager’s role in helping to enhance the environment. Other factors influencing the transfer environment were not examined in this study and, therefore, the results cannot be generalized to include other conditions.

The precise names of the organizations where the study took place, were not disclosed, under an agreement between the researcher and the companies, in order to further protect the confidentiality of the participants and the anonymity of the manufactures in a highly competitive market. The omission of the organizational names slightly weakens the effect of the findings because others are unable to contact the specific companies to learn more about the implications of the study.
Another limitation was derived from the number of first-line supervisors who were unable to complete the Frontline Leadership course. Company I had a completion rate of 60%; Company II, 100%; and Company III, 68%. With 17 trainees not in attendance for the completion of training, the total number of participants was lessened.

Organization of the Study

This study is organized into five chapters. The first chapter contains the statement of the problem, the purpose of the study, conceptual basis and importance of the study, and the organization of the study. Chapter II is concerned with a review of the literature relevant to the study in regards to previous studies and research. It begins with a rationale for the study based upon current literature which includes a historical context for training, the importance of the transfer of training, factors that facilitate transfer of training, a proposed need for linking training with company strategic goals via an Impact Map, and ends with research questions and hypotheses. The third chapter discusses the intended methodology including the setting, subjects, treatment, instrumentation, training intervention, data collection, and data analysis including the statistical methods used to analyze data.

In Chapter IV, data analysis and discussion of results are presented. Conclusions drawn from each research hypothesizes is offered and summarized. Finally, Chapter V deals with an overall summary and an interpretation of major findings. Recommendations for future studies are also included.
CHAPTER II

REVIEW OF RELATED LITERATURE

The literature review consists of five areas: (1) historical review of training, (2) importance of transfer of training, (3) factors that facilitate training, (4) proposed need for linkage of training to company goals, and (5) research questions and hypotheses.

Historical Review of Training

Through examining a brief historical review of training, we will discover the chain of events that shaped the modern training arena as we know it. The technology explosion over the past 20 years has forced companies to look at their training needs in a new and more focused way. Just like the modern day technology, training has evolved over the past century encompassing the systems approach to training. The systems approach is an acknowledgment that there is an interdependency between departments, actions, and the people involved within an organization (Brinkerhoff & Gill, 1994; Deming, 1986; Senge, 1990). Partnerships among sales, marketing, manufacturing, quality control and training are formed to strive for overall company improvements.

In the U.S., apprenticeship was the first training model fashioned from the European example. Currently, apprenticeship is defined as a structured relationship between an employer and an employee during which time the worker, or apprentice,
learns a skilled trade, including both on-the-job training and related trade instruction (Bona, 1997).

Between the Civil War and World War I the term vocational education came into being. Increased business orders and the need to produce more at a faster rate made the long term apprenticeship training programs an ineffective way to train the number of workers who were needed for production. Factories developed their own training schools. World War II intensified the trend to produce at a quicker rate and the training function became an integral part of the company's mission. The methodology used to train the thousands of people who were pushed into the workforce without appropriate skills relied on concrete, practical content with little or no theory. Supervisors employed job-instruction training (JIT) and on-the-job training (OJT) to upgrade the needed skills of the workers (Zenger, 1996).

During the 1950s and 1960s, emphasis was placed on managers' human relationship skill improvement evolving from the previous focus on teaching techniques. Case study method, role play, sensitivity training, T-groups, games and simulations were all methodologies used to enhance the human relation skills (Blake, 1995). Group dynamics, group problem solving and grid training, place emphasis on the group and became the foundation of the organization.

The seventies and eighties ushered in the excitement of the new technology (robotics, programmable logic controllers, and computerized machinery) along with the move toward the personal era. Encounter groups and experiential learning elevated the individual above the organization's needs (Zenger, 1996).

Today, in the nineties, training faces many challenges. Byham and Pescuric (1996) identify a few of the major struggles. Increased technical, managerial, and organizational sophistication require increased skills at all personnel levels. With
productivity goals continuously on the rise, workers have less time for technical
classroom training which takes them off of the work floor; however, state and federal
regulations require more and more mandatory training, such as safety training in
hazardous materials, blood borne pathogens, and confined space. Couple the above,
with the trend of modern corporations having fewer and fewer in-house trainers, the
training climate for the 1990s is a major challenge.

In response to the technological advances in the workplace, employees are
required to do things they have not been trained to do. Managers have to connect the
training to the employees real work, deliver it Just-In-Time, tie it into the master plan
of the organization, couple payoffs to learning, utilize the technology in the delivery
of training, support the training efforts in the work environment and evaluate the
impact of training on the overall effectiveness of the organization (Brinkerhoff & Gill,
1994; Tannenbaum & Yukl, 1992; Zenger, 1996). The purpose of this present study
is to see if training that is tied into the master plan of an organization (linking training
to the company’s business goals) has an effect on the transfer environment and the
transfer of training.

Importance of Transfer of Training

The lack of ability for managers, trainers and trainees to effectively bridge
newly learned skills into performance in the work setting has been a major concern in
the training field. Gephart, Marsick, Van Buren, and Spiro (1996) state, “Training is
a tool for learning; learning—and ultimately performance—are the desired outcomes
of training” (p. 43). No matter how good the training program, it is inadequate if it
fails to produce significant new behaviors in the work setting (Leifer & Newstrom,
1980).
Tannenbaum and Yukl (1992) define transfer of training as "the extent to which trainees effectively apply the knowledge, skills, and attitudes gained in a training context back to the job" (p. 420). This definition is concurrent with other researchers that define transfer of training (Baldwin & Ford, 1988; Georgenson, 1982; Wexley & Lathum, 1981). Newstrom (1986) refers to the transfer of training as having three components:

1. There has to be prior learning or knowledge;
2. There has to be a use or application for the learning; and
3. The assessment of the usage consists of its effectiveness and sustainability over time.

In the present study, transfer of training is defined as "the extent to which a trainee uses or applies to the work setting, the specific skills learned during the training session."

Many researchers have stressed the importance of transfer of training (Baldwin & Ford, 1988; Brinkerhoff, 1987, 1989; Newstrom, 1986; Tracey, Tannenbaum, & Kavanagh, 1995; Tziner, Haccoun, & Kadish, 1991). The researchers stress that employees involved in any form of organizational intervention, whether it be training the workforce, changing the corporate cultural, or increasing productivity, are concerned with the chronic problem of training transferability. Even though the concern for bridging what is learned in the classroom onto the work floor has been in the forefront for many, there has been a lack of research conducted in a field setting and practical application of the transfer of training (Ferdinandi, 1995; Sawczuk, 1990; Tracey et al., 1995). This study was conducted in three manufacturing companies and has implications for other manufacturing organizations.
Until recently, studies conducted on the transfer of training focused almost entirely on the class context and the responsibility of the training department, trainer and trainees. Kelley, Orgel, and Baer (1985) enumerated on several strategies for the transfer of training all of which are concerned with improving the learners skills, classroom techniques, and evaluation of the mastery. There are more elements to transfer than the focus of what the trainee learns and how to teach the skills better. Knowledge is not easily transferred by the learner without environmental support. Transfer is selective and is rooted in cultural practices and values (Pea, 1987). For too long researchers have been asking, "Does training work?" rather than, "Why does it work?" (Tracey et al., 1995). Even though some researchers in the 1970s and 1980s began looking at other factors such as management's role in the transfer of training and the time element of before and after training (Huczynski & Lewis, 1980; Leifer & Newstrom, 1980; Zemke & Gunkler, 1985) it wasn't until recently that training specialists looked intensively at a more holistic view to training and its transferability.

Training for impact and looking at a new paradigm for the training model are two of the more current approaches to facilitate the transfer of training, including forming partnerships for training, encompassing a time continuum, and aligning training to business goals to create an impact on the company's bottom line (Brinkerhoff & Gill, 1994; Broad & Newstrom, 1992; Gill, 1995; Gilley, in press; Phillips & Broad, 1997; Phillips, Watkins, & Marsick, 1996; Robinson & Robinson, 1989).

According to the American Society for Training and Development's "Expenditure on Employer-Provided Training" (Bassi, 1996), employers spent $55.3 billion on training, including direct cost (trainers' salaries, equipment, room, travel,
and tuition reimbursement) and indirect cost (wages and fringe benefits of employees while in training) and averaged $569 per employee. These expenditures are, however, only partially impacting the work the trainees are producing. Only 10% (Georgenson, 1982) to 30% (Olsen, 1996) of the training is actually transferred to the work environment. A greater capacity for the transfer of training has to be perfected in order for organizations to stay competitive and develop a skilled workforce. Focusing on partnerships between managers, trainer, and trainees and investigating the training process before, during, and after the classroom intervention are key in pursuing high impact training (Broad & Newstrom, 1992; Leifer & Newstrom, 1980).

Newstrom (1986) stated, “Transfer management, then, consists of a variety of actions before, during, and after training by managers of trainees, management development personnel, and management trainees, themselves the increase the probability of success” (p. 39). He developed a classification model (Table 1) for leveraging training.

<table>
<thead>
<tr>
<th>Primary Responsibility</th>
<th>Before</th>
<th>During</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager (organizational climate)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trainees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trainer</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This present study incorporates portions of Broad and Newstrom's (1992) model and strategies for managing transfer of training.

"Training is a process, not just an event" (p. 165), state Brinkerhoff and Gill (1994). The needs of the training participants all have to be evaluated, including the trainees' reactions to the training and performance in the classroom, the organization's response to the training activities (before, during and after), the usefulness of the various training strategies, and the transfer of training. Also, the training has to be just-in-time and just-enough in order to have optimal transfer (Brinkerhoff & Gill, 1994). The authors urge organizations and especially HRD managers to make a paradigm shift in their mental model about the training process.

Gill (1995) describe five myths that constitute the old paradigm:

1. Training makes a difference.
2. Training's purpose is to achieve learning objectives.
3. The trainer's purpose is to manage training programs.
4. Training is training's job.
5. Trainees should enjoy the training they receive. (p. 26)

These myths can be overcome, according to Brinkerhoff and Gill (1992) by linking training explicitly to business needs and strategic goals, maintaining a strong customer focus in the design and development of training operations, managing training with a systems approach to performance in the organization, and measuring the process for continuous improvement.

Continuing with the paradigm shift, they say that new learning alliances have to be created between learners and managers, training and other departments, and among the entire organization's people and processes.
Several studies have recommended future research on trainees’ perception of work group (managers, peers, subordinates) support and training climate (Noe & Schmitt, 1986), developing a more supportive environment (Baldwin & Ford, 1988), building stronger partnerships between managers, trainees and trainers before, during and after training (Brinkerhoff & Montesino, 1993), and aligning training with business goals (De Cardenas, 1996; Montesino, 1995). This study expands the body of information pertaining to transfer, environment, and alignment of training to the organization’s strategic direction.

Factors That Facilitate or Inhibit Transfer of Training

A number of factors affect the likelihood of transferring skills and knowledge learned in the classroom to the work site. These factors can be categorized as either hindering or inhibiting the transferred learning. The work environment, transfer barriers, and social support and environmental enhancing strategies will be reviewed in this section.

Transfer of Training Environment

Edgar Schein (1965), a leading researcher in culture of organizations strongly believes that a nonsupportive climate or culture within departments of an organization eradicates any new behaviors. Change in work behaviors due to training efforts are ineffective in environments that do not support the new behaviors. The work environment, coupled with individual and organizational values, creates the climate in which training is conducted. Social cues or the interactions among trainees, peers and supervisors prompt or hinder trainees to use their training (Tracey et al., 1995). The number one aspect of transfer of training is the organizational climate.
which is influenced by HRD, management support of change and new ideas, an atmosphere with open communication, and job security according to Van Velsor and Musselwhite (1986).

Many researchers have found the supervisor's role in supporting the transfer of training to be of critical importance (Cohen, 1990; Cole, 1997; Huczynski & Lewis, 1980; Robinson & Robinson, 1989; Trost, 1985; Tziner et al., 1991). In this study the supervisors of the trainees are given a treatment to help them improve the transfer of training environment for their workers.

According to Senge (1990), managers and supervisors should guide others as "teachers, stewards and designers" to reap the long-term effect of positive behavioral performances. Unless managers and supervisors see a need for change within the outdated systems, they can actively inhibit learning and paralyze the effect of training. In a continuous learning culture, managers need to articulate guiding ideas, examine the learning infrastructure to see how learning spreads, and champion needed changes.

The transfer of training climate and continuous learning culture is directly related to posttraining behaviors (Tracey et al., 1995). The authors go on to describe the continuous learning culture as one in which learning new knowledge and skills, supporting the usage of the new skills by social interactions and work relationships, providing a formal system of learning, and placing emphasis on innovation and competition, as everyone's responsibility. The work environment that adheres to sociotechnical principles acts as a catalyst to the training transfer and improves the product and work quality (Kontoghiorghes, 1997). More specifically, the pre- and posttraining environments are critical for a value added, training event (Brinkerhoff & Gill, 1992).
Many researchers have found a relationship between a supportive training environment and the posttraining behaviors of trainees (Burke, 1996; Clark, 1990; Cohen, 1990; Noe, 1986; Van Velsor & Musselewhite, 1986; Zayed, 1994). In a large study of over a 100 manager trainees and approximately 300 restaurant managers, Rouillier and Goldstein (1991) observed a positive relationship between training climate and posttraining behaviors. Work environment factors consisting of supervisory support, peer support, and expected accountability significantly affected motivation of trainees to transfer skills according to a recent study conducted by Poteet (1997). Baldwin and Magjuka (1991, cited in Tannebaum & Yukl, 1992) found when managers conveyed the positive, environmental message that training was important by asking trainees to prepare a posttraining summary, their trainees reported a stronger intention to use what they had learned. Facteau et al. (1995) studied over 1,000 government managers and supervisors, measuring several environmental transfer constructs: training reputation, training incentive, social support for training, and perceived training transfer. They found a positive relationship between supervisor support and pretraining motivation and a positive relationship between subordinate support and peer support and transfer of training.

With all of the positive support for the relationship between training environment and usage of training, several researchers recommend that further steps should be taken. If environment has an effect on training transfer, and improvement is needed in the percentage of training usage in the work setting (less than 30% is transferred), then why not try to improve the training environment to create more transfer of training? Tannebaum and Yukl (1992) suggest that organizations modify their posttraining environment to encourage greater transfer. Rouillier and Goldstein (1991) also recommend that there is a benefit in manipulating the work environment.
to support subsequent transfer. For these reasons, the present study assessed a method for improving the training environment by working with trainees' managers in the area of aligning training to business goals.

**Barriers to the Transfer of Training**

Before proceeding to the role of supervisors enhancing the usage of training and transfer of training strategies, one must consider the obstacles faced by the trainees to improve performance behaviors after the training intervention.

There are several reasons why transfer fails. Most organizations ignore Senge's (1990) suggestions for them to create a continuous learning culture in which everyone takes responsibility for learning. The reason this occurs, argues Gilley (in press), is that in nearly all organizations no one owns the training, and therefore, no one is responsible for the outcome and usage. Secondly, according to Gilley, when a concentrated approach toward training is used it results in training overload with much of the training not being implemented on the work floor. Thirdly, he continues, the lack of top management's involvement is a barrier to the training transfer. Finally, failure to establish posttraining expectations and follow up can hinder the usage of training. These barriers are constructed by and the responsibility of HRD, managers, the organization, and the trainees.

In a study of 84 HRD managers and 36 trainers, Newstrom (1986) catalogued impediments to transfer as listed, in order of importance, by the trainers. The top 3 out of 10 reasons focused on factors in the training environment. Lack of on-the-job reinforcement, interference from the immediate environment, and nonsupportive organizational climate were the most frequently mentioned impediments.
In the early seventies, researchers began looking at factors that facilitated and inhibited changes in the organization (Vandenput, 1973) and conditions that were positive for transfer and organizational barriers (Stiefel, 1974). They found that support from innovative staff people and flexibility to reorganize (Vandenput, 1973) and a training process that incorporated situations similar to those on the job, a variety of learning, learning the right amount (just-enough), and within a correct time span (just-in-time) (Stiefel, 1974) to be supportive of the usage of newly learned information and organizational change. As for the barriers, they found the management, the organizational system and the primary work groups to cause the most impediments to the transfer of training. Marx (1986b) agreed that much transfer is thwarted by overwhelming organizational circumstances.

In a recent study of a consumers product company, Ferdinandi (1995) found a lower than expected transfer of skills even after pretest and posttest scores for context and content showed a significant increase. Analysis of qualitative data indicated that the lack of support from the subjects' supervisors, no performance feedback to the subjects or supervisors, and difficulty in integrating the new tasks within their primary job activities played a role in limiting transfer.

The above studies have shown that barriers to the transfer of training are most prevalent in the organizational climate. In order to extend the knowledge base to improve the poor showing for transfer of training, more research is needed in the workplace setting. Tracey et al. (1995) states that limited studies have been conducted in the workplace and researchers need to focus in on the real life environment to "identify, operationalize, and empirically assess training—specific situational factors that either facilitate or inhibit the application of newly acquired skills" (p. 239). This present study took place at three manufacturing companies in
company sponsored training sessions taught by a local community college’s department of customized training.

**Transfer Environment Support by Supervisors**

It is imperative for the managers/supervisors of the trainees to give support during and after training, providing contact and feedback. “Lack of management support and involvement,” states Gilley (in press), “is the primary cause of learning transfer failure” (p.133). The research literature supports this claim. Without active support and encouragement, it is difficult and almost futile to train employees especially in leadership skills (Trost, 1985). Similarly, one of Huczynski and Lewis’ (1980) major conclusions was the pervading influence of the learner’s supervisor in all phases of the learning process.

Recent empirical studies have found supervisory support to be a leading factor in the success of transferring training to the work site. Perception of managers’ support was more important than action planning in influencing intention to transfer, initiation of transfer, and overall transfer (Foxon, 1995). Even though program design elements were found to have greater impact on transfer of training, organizational support was also important according to a study conducted by Clarke (1992). Supervisory support and involvement was a predictor of speed scores (using the skills taught in the training) of Job Service employees in a study conducted by Hastings (1994).

One element or indicator for transfer is the trainee’s motivation to use skills at their jobs. The following studies showed a motivational increase to transfer new skills when supervisors were supportive. “Greater perceived managerial support resulted in enhanced skills transfer by way of increased motivation,” stated Thompson (1994) in
her dissertation abstract. Cohen (1990) found that the more supportive supervisors are of training, the more motivated trainees will be to attend, learn and use the training. Organizational support in the form of supervisory behaviors plus coworker support leads to greater motivation of the trainees to transfer training (Kehrhahn, 1995). Additionally, Sawczuk (1990) found that most participants favored increased interaction between managers and their subordinates but that most managers and supervisors appeared not to be aware of the important role they play in the transfer issue.

Supervisory support is an important component in the transfer of training construct. The extent to which the work environment is supportive, as shown in the behaviors of supervisors and managers specifically, influences the degree of positive transfer from the training program to the work environment (Hanover, 1993).

Strategies for Greater Transfer

To best understand the strategies managers can employ to ensure environmental support and, thus, greater transfer, an examination of researchers work in this area follows. Leifer and Newstrom (1980) suggest as follow up to the training event that supervisors “encourage skill use, give feedback, and reward desired outcomes” (p. 46). Martineau (1995) found that pre- and posttraining meetings between supervisors and trainees to discuss training expectations, what was learned and how the trainee plans to apply the new skills was helpful in the trainees’ usage of the training. Providing time, resources and materials to practice skills is also part of Martineau’s transfer strategy.

Marx (1986a) taught trainees how to retain skills they learned in the classroom when they return to their jobs by using his technique of Relapse Prevention.
Strategies. The training on Relapse Prevention (RP) has several goals. First, it provides trainers with techniques to use to increase learner attention to skill retention. Secondly, the learner diagnoses how the new skills might be vulnerable to relapse and how the problem can be remedied. Finally, the data from the trainees’ perception of difficult situations can be given to management to help the trainees in their transfer efforts. This model focuses primarily on the role of the trainee creating his or her own support and retention practices; however, Tziner et al. (1991) found that the RP strategies were more effective for trainees who perceived the work environment (supervisors’ behavior) to be supportive of skill transfer.

In her research with 84 chapter presidents of American Society for Training and Development, Broad (1982) found 74 items, that, if used by management, would develop visible, strong management support for training. The determinates of the environment consist of categories identified by Nadler (1971) which include upper management involvement, pretraining preparation, support during training, job linkage, follow-up. This present study incorporated some of Broad’s list of training support activities into the survey that was used for this study.

Robinson and Robinson (1989) created a model called “Training for Impact” (p. 15) which creates a partnership with key line management ensuring that the learning experience and the work environment are operative. The business need is identified that drives the training request. Training is, thus, seen as a means to an end for improved business results because of the increased skills learned during the training, rather than training being an end in itself. The improved business results could include: improved quality of service, increased sales, reduction in scrap, fewer sick days taken, etc. This model of tying training to business goals of the company leads to “Training for Impact.”
A more specific example for linking training to the strategic business goals of
the company is a model called "Impact Mapping" (Brinkerhoff & Gill, 1994). This is
the model that was used in the current study and will be discussed more fully in the
succeeding section.

**Linkage of Training With Company Goals**

Among organizational leaders, there is a growing recognition that in order for
companies to reach their corporate objectives, increasing the workforce skill level
must be connected directly to these goals. However, the practice of linking training
to the company goals does not seem to be the direction that most companies are
taking even though the real power of training is to align employees with the business
strategies via the training event (Koonce, 1997). "When training strategies ensure
acquisition of knowledge, skills and attitude which result in improved performance or
safety on the job, the training subsystem makes a positive contribution to
organizational goals and effectiveness" (p. 66), states Robertson (1996) in his study
on how training technology enhances plant performances.

Course content, in any training endeavor, should be linked directly to the key
business goals of an organization in order to result in positive change. Skills linked to
performance improvements effect profits, turnover, sales, scrap rate, and morale
according to Georgenson (1982). As Robinson and Robinson (1989) affirm, "a tight
tether to business needs" (p. 6) must be included when referring to company training.

This alignment or "tether" has a measurable outcome for the company's
return on investment. Phillips (1996) used Kirkpatrick's (1994) four levels of
evaluating training processes to measure return on investment with level one being
the trainees' reactions and their planned actions. Level two is the evaluation of the
learning that took place in the classroom, i.e., pretest/posttest. Level three is the on-the-job application of the learning or transfer of training. Level four is the evaluating the business results such as did the OJT produce measurable results? Finally, level five, added by Phillips, evaluates the return on investment, asking, “Was the training cost less than the training value to the company?” and, “Was there value added?”

Many authors suggest the importance of training’s strategic role in impacting the company’s bottom line (Gephart et al., 1996; Gill, 1995; Reinhart, 1997; Robinson, 1992); however, insufficient empirical research has been done in the area of linking training to business goals. Except for a study completed by De Cardenas (1996) and a study conducted by Montesino (1995), other researchers have alluded to the importance of training for impacting business goals but few formal studies have been conducted.

Robinson (1992) indicates executive development that integrates learning with work and aligns skills with business goals results in training having a real impact on business. In order to manage the learning support design and development efforts, Reinhart (1997) suggests that a performance model based on strategic goals be created. Gephart et al. (1996) suggests that trainers tie learning to organizational goals and identify desired competencies and learning that will foster the competencies, create systems to coordinate across all levels of the organization and create a climate for learning.

Gill (1995) explains more thoroughly how to link training to business outcomes. Business needs and goals must be understood. For each of the business goals, knowledge and skills, job behaviors, job success indicators, and business indicators, need to be mapped out. A design for pre, during, and after learning activities needs to be integrated into the business process. As business goals change.
the design must be flexible to change also. Throughout the training process the
learning activities link to the business needs. Finally, repeated training intervention is
carried out to reinforce learning over a longer period of time. This research study uses
the technique of mapping out the company's goals to the trainee's needed knowledge
and skills, the job behaviors, the job success indicators, and the business indicators.
This process is called Impact Mapping (IM).

The purpose of an IM is to have a relatively simple document depicting the
entire complex training process by which the activity of the employee's training is
linked to the strategic direction of the company (Brinkerhoff & Gill, 1994). More
specifically they state:

The impact map is a tool for implementing the highly effective training
approach. This tool helps training customers conceptualize, plan design, and
manage Highly Effective Training, and its use creates a shared vision of
training that fits within the new, emerging paradigm that may become the
dominate mental model for training in the organization. (p. 76)

The IM, by linking newly learned skills to the company's strategic direction,
helps organizations evaluate training outcomes to Kirkpatrick's (1994) fourth level,
showing tangible results that could more than pay for the cost of training.

The two empirical studies, mentioned previously, by De Cardenas (1996) and
Montesino (1995), will now be described. De Cardenas (1996) in her doctoral study
describing the process of helping a company transition from training for activity to
training for impact, as a way of achieving business goals, confirmed that transfer of
training requires support in the work environment and changes in management's
thinking about the role of training to achieve business goals. Subjects were
ElectroPlus employees at all levels who had been in some form of training activity
over the course of the study.
Montesino (1995) studied 147 sale representatives and 36 field managers in a Fortune 200 company in Michigan to explore the relationship between transfer support and alignment of training with strategic direction of the company. His findings showed the importance of linking training to the strategic goals of the organizations and building partnerships between trainees, trainers and managers for greater transfer of training.

Several researchers, including the two sited above, have stressed the need for further research on and training for supervisors on their role in the transfer issue. Supervisors do not seem to notice transfer changes nor do they know how to support them, according to Marx (1986b). Skill building exercises for supervisors on how to overcome inhibitors to transfer to increase or facilitate greater usage of training is crucial for organizational improvements (Ahn, 1994; Clark, 1990; Legut, 1995; Tracey et al., 1995).

This present study explains to managers of Frontline Leadership trainees and trains them in the importance of linking training to the strategic direction of the organization by mapping the alignment, creating a more positive transfer environment and nurturing greater transfer.

Research Questions and Hypotheses

According to the literature review, transfer of training from the classroom to the work environment is a significant topic in the field of training and development. The transfer environment enhanced by the supportive behaviors of supervisors is a key element in enabling greater transfer of trainees skills to the work place. Highly Effective Training (Brinkerhoff & Gill, 1994) and Training for Impact (Robinson & Robinson, 1989) stress the importance of creating a linkage between training and
company goals to impact the strategic direction of the company. Researchers suggest that little has been done in a field setting to enhance supervisors' skills to create a more supportive environment for the usage of training. This research study hoped to demonstrate that (a) managers who were trained in developing an Impact Map, linking training with company goals, would create a more supportive transfer environment; and (b) their trainees would report greater transfer of classroom instruction to the work place.

A control-group design experiment was conducted and the following operational hypotheses were studied:

1. Mean score on managers' self-report of environment support actions will be higher than the self-report score for the comparison group of managers. A t test for independent means was used with the null being tested at the .05 level of significance.

2. Mean score on trainees' report of managers' environment support actions will be higher than the score for the comparison group of trainees. A t test for independent means was used with the null being tested at the .05 level of significance.

3. Mean score on managers' report of trainees' usage of training will be higher than the score of the comparison group of managers. A t test for independent means was used with the null being tested at the .05 level of significance.

4. Mean score on trainees' self-report of usage of training will be higher than the self-report score of the comparison group of trainees. A t test for independent means was used with the null being tested at the .05 level of significance.

5. There will be a positive correlation between the mean of trainees' report of managers' environment support actions and the mean of managers' self-report of
transfer support actions. The product moment coefficient of correlation was used to
determine a relationship.

6. There will be a positive correlation between the mean of trainees’ self-
report of usage of training and the mean of managers’ report of trainees’ usage of
training. The product moment coefficient of correlation was used to determine a
relationship.
CHAPTER III

METHODOLOGY AND PROCEDURES

The purpose of this study was to investigate the hypotheses that if managers were engaged in specific activities aimed at increasing their understanding of the linkage of employee training to business goals, then they would in turn create a more positive transfer environment, resulting in greater transfer of training received by their employees. The researcher wanted to know if the managers' actions created a more supportive transfer environment, and if the trainees engaged in more usage of training, depending on their managers participation in the Impact Map workshop of aligning training with the strategic direction of the company.

More specifically, this study proposed that a more supportive training environment could be created and, thus, induce more usage of training in the work setting, by teaching managers of the Frontline Leadership trainees to (a) understand the relationship between employee training and company strategic direction, e.g., Impact Mapping; (b) inform their trainees about this specific relationship between the training they receive in the classroom and the company goals; and (c) exhibit an interest in what happens after the training so that the transfer of training would be greater than if managers had not received the goal/training connection.

Two outcome questions were asked:

1. Was the transfer climate better for those trainees whose managers received a session in Impact Mapping?
2. Was the transfer of training greater for those trainees whose managers attended an Impact Map Workshop?

The independent variable was managers' understanding of the linkage of employee training to business goals (Impact Mapping). The dependent variables were (a) managers' and trainees' reports of the transfer environment created by the managers, and (b) managers' and trainees' reports of the transfer of training by the trainees.

Design of Study

The basic design for this study was experimental. Three companies in Michigan requested Frontline Leadership training for their first-line supervisors from the local community college. First-line supervisors were selected by top management to attend the Frontline Leadership training. After the trainees were selected their managers were identified and divided into two groups.

The managers were divided into the comparison Group A and the experimental Group B by using a random selection method process. For each company, managers were selected for the experimental group by placing their names in a container and randomly pulling out half of the names. Those managers whose names were selected became the experimental Group B and those managers whose names were not drawn became the comparison Group A. For example, if there were six managers from Company I who had direct reports participating in the Frontline Leadership training, the managers' names were written on a piece of paper and placed in a container. Without looking, the researcher would reach into the container and pull out three names, one at a time. These three managers would become
Managers Group B for Company I. Their corresponding employees in the Frontline Leadership training would become Trainees Group B.

Prior to the Frontline Leadership training at each of the companies, the managers in Group A were not consulted or asked to do anything different than they usually did before, during, or after training was conducted. They had no session on Impact Mapping. However, they were given an Participant Profile to ascertain previous knowledge and education on impact mapping and to compare similarities between managers for Groups A and B.

Managers in the experimental Group B were given an Impact Map treatment, linking training objectives to the business plan (described more fully in this chapter under the section entitled “Treatment of Impact Map Workshop for Managers”). The managers for Group B were asked to share the linkage information with their trainees. They were also given an Participant Profile to use in comparing the two groups of managers.

The design process of identifying trainees' managers, randomly selecting half of the managers for the Impact Map treatment and conducting the Impact Map workshop was repeated at each of the three companies before the Frontline Leadership training was conducted. Table 2 shows the design process and layout.

Setting

This study took place on-site at three different manufacturing facilities in the Battle Creek, Michigan area. The facilities fit into the range of a midsize company, between 200 and 800 employees, and vary in what they manufacture. The companies requested Frontline Leadership training from the community college staff for their current employees. Sixteen to 24 hours of training was given to the three companies,
### Table 2
Design Process and Layout of Study

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>First-line Supervisor Trainees</th>
<th>Managers of Trainees</th>
<th>Treatment Administered to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to Frontline Leadership training</td>
<td>Selected by the company to attend training</td>
<td>Manager of each trainee was identified</td>
<td>Trainees &amp; Managers from Companies I, II, &amp; III</td>
</tr>
<tr>
<td>Prior to Frontline Leadership training</td>
<td></td>
<td>Randomly divide into groups A &amp; B</td>
<td>Managers from Companies I, II, &amp; III</td>
</tr>
<tr>
<td>Prior to Frontline Leadership training</td>
<td></td>
<td>Experimental Group B given Impact Map workshop</td>
<td>Group B Managers from Companies I, II, &amp; III</td>
</tr>
<tr>
<td>Prior to Frontline Leadership training</td>
<td></td>
<td>Comparison Group A given no treatment</td>
<td>Group A Managers from Companies I, II, &amp; III</td>
</tr>
<tr>
<td>Prior to Frontline Leadership training</td>
<td>Participant Profile collected</td>
<td>Participant Profile collected</td>
<td>Trainees &amp; Managers from Companies I, II, &amp; III</td>
</tr>
<tr>
<td>During Frontline Leadership Training</td>
<td>Attended training</td>
<td>No contact was made between researcher and groups A or B</td>
<td>Trainees &amp; Managers from Companies I, II, &amp; III</td>
</tr>
</tbody>
</table>

conducted over a 6-week period at two of the companies and over a 2-day period at the third.

**Subjects**

The study participants consisted of three types:
1. Expert consultant: This individual was a professional from Kalamazoo, Michigan, who provided the Impact Map workshops at the three different companies. He guided the managers in the experimental groups from each of the companies to develop an Impact Map for the Frontline Leadership training event which was to be conducted at each company site.

2. Managers: Mid- to top-level managers, who had trainees in the Frontline Leadership training reporting directly to them, were the manager participants who completed reports on transfer environment and transfer of training. Half of the managers, those in the experimental Group B, were given the Impact Map workshop by the expert consultant.

3. Frontline Leadership Trainees: Most of the Frontline Leadership trainees were first-line supervisors/team leaders. The trainees included supervisors from business operations (e.g., accounting, personnel, marketing) and from production areas (e.g., quality, production lines, packing, shipping). They were selected for training from the entire population of employees by upper-level management at the three companies. Also, they were selected for Frontline Leadership training from three shift operations. Some of the trainees worked during the day, others during the late afternoon and evening, and others worked throughout the night. The trainees represented employees from all 24 hours of manufacturing operations. The training participants, along with their managers, were a representative sample of the entire number of supervisors and managers employed by the companies.

Each individual trainee and his or her manager were given a Consent Form (see Appendix A) to sign if they agreed that the Participant Profile, transfer and environment reports and evaluation results could be utilized for research purposes only. It was agreed by the researcher that all data would be kept confidential with
only group data, not individual data, being reported in future publications. Trainees or their managers could have refused to sign the consent form and not participated in the research, but still would have been able to participate in the training with no penalty.

Impact Map Workshop for Managers

A consultant, expert in Impact Mapping (IM), and the researcher conducted Impact Mapping workshops for each group of Group B managers. At this session managers developed an "Impact Map" that depicted the linkage among the company's strategic goals and business objectives, job performance indicators, job behaviors, and new knowledge skills to be acquired in the Frontline Leadership training (Brinkerhoff, 1996).

Prior to the Impact Mapping workshop, managers were asked to identify and bring to the workshop company initiatives or goals that had been targeted for completion during the upcoming year. As an initial IM workshop exercise, managers were guided in selecting one or more of these goals as goals that could be impacted by the Frontline Leadership training. After selecting a specific company goal, the managers defined corresponding business objectives, job performance indicators, and job behaviors. The final steps were to relate the job behaviors to Frontline Leadership skills and, then, to the trainee classification of supervisor.

After the IM document was completed (see Appendix B for completed sample), the managers were told how to present and explain the training map to their trainees. The workshop leaders recommended several supportive actions to be taken by managers for enhancement of the transfer environment. These were grouped into actions managers could take before, during, and after the training. For example,
before training managers were encouraged to talk to their direct reports about the linkage between the training they were about to begin and the company goals, using the IM as a model to reference. Managers were also asked to tell their employees why they were selected for the training and what behavioral outcomes were expected. During the training, managers were requested to take an interest in their trainees’ opinions by asking them how they were doing in the class and what they thought of the instruction. After the training, managers were instructed to inquire what the trainees had learned and how they would apply the newly gained knowledge.

Impact Map Description

The purpose of an IM is to have a relatively simple document depicting the entire complex training process by which the activity of the employee’s training is linked to the strategic direction of the company (Brinkerhoff & Gill, 1994). During this study, the Impact Map assisted the managers in creating a supportive transfer environment, by knowing the importance of linking training to the company goals, and enhancing greater transfer of training. In other words, the purpose of the Impact Map for this study, was to help the managers be more committed to the systems approach to training and to build a more supportive environment for enhancing the transfer of training. During this experimental study, the Impact Map was used as the treatment for Group B managers from each of the three companies.

Table 3 presents a grid for mapping out business goals and training needs as designed by Brinkerhoff and Gill (1994) and used in this study.

Managers were instructed, as a group, to develop one Impact Map for the company’s Frontline Leadership training event. The workshop facilitators asked specific questions to the managers pertaining to each of the categories on the Impact
Map. From their answers and the discussions that followed, the consultant wrote information under the appropriate columns, and proceeded from right to left to complete the information pertaining to first-line supervisors. (See Appendix B for a completed sample.)

The managers were instructed to give information for each column topic by using practical descriptions and answering the following questions:

1. Company Strategic Goals: Strategic goals were defined to managers as the overall, company-wide outcomes or business achievements, hoped to be accomplished during the upcoming year. Managers were asked, “What do you sense are some strategic goals of your company for this upcoming year?” and “What is generally and universally held by senior management to be important goals?”

<table>
<thead>
<tr>
<th>Trainees</th>
<th>Knowledge &amp; Skills</th>
<th>Job Behavior</th>
<th>Job Performance Indicators</th>
<th>Business Objectives</th>
<th>Company's Strategic Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-line Supervisors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled Trades</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machine Operators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Managers were then guided in selecting one or more of these goals that could be impacted by the Frontline Leadership training.

2. Business Objectives: Business objectives were described as being specific, critical outcomes or business results that are measurable and obtainable for individual plants or departments within the company. A question that was asked of managers to illicit these objectives was “What processes do you need to improve in your specific functional area that relates to one or more of the company goals?”

3. Job Performance Indicators: The job performance indicators were defined as key job results that are measurable objectives for each job behavior. “What are some things the supervisors need to be doing in order to meet the business objectives?” the consultant asked of the managers.

4. Job Behaviors: Job behaviors were described as those actions or critical tasks that trainees are expected to do after the training is completed. The question for this section was, “What changes in job behavior do you want to see from your supervisors as a result of this training?”

5. New Knowledge and Skills: The new learning objectives were defined as specific knowledge, skills, and attitudes needed by the trainee to satisfactorily complete his or her job. For example, for the Frontline Leadership training several objectives were: (a) give constructive feedback, (b) build consensus around shift issues, and (c) coach for optimal performance. The consultant asked the managers, “What supervisory skills or new leadership knowledge is needed by your first-line supervisors to do their jobs properly?”

After an Impact Map was created, the managers used it as a tool to engage their supervisors by telling them what they were going to learn in the Frontline
Leadership class, how it translated into different behaviors on the job, and how it related to improved business outcomes.

Frontline Leadership Training for Supervisors

There were three separate classes of Frontline Leadership training held since this study was conducted at three individual companies. The trainees from Company I were in one class, the trainees from Company II were in another class, and the trainees from Company III were in yet another class.

After the supervisors/team leaders were selected, their managers were divided into the two groups—Group A receiving no treatment and Group B receiving an IM treatment. Trainees of managers in Groups A and B were together in the same class and were given 16–24 hours of instruction in supervisory skills, over a 4- to 6-week period. Sample topics covered in the Frontline Leadership course were: Your Role and the Basic Principles, Giving Constructive Feedback, Getting Good Information from Others, Dealing with Emotional Behavior, Recognizing Positive Results and Winning Support from Others (see Appendix C for course objectives).

During the training intervention trainees were given an Participant Profile, pretest, several weeks of training, posttest and follow-up surveys. Their managers received an Participant Profile and follow-up surveys. In addition, before the Frontline Leadership training began, managers from Group B were given instructions and coached by a consultant and researcher to develop an Impact Map for their company's training.

The trainees' Frontline Leadership training intervention and managers' Group B Impact Map workshop treatment were organized for Group A and Group B as presented in Table 4.
Table 4
Training Intervention and Impact Map Workshop Treatment

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Participants in Group A</th>
<th>Participants in Group B</th>
<th>Treatment Administered to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before training began</td>
<td></td>
<td>Met with Group B managers for IM session</td>
<td>Group B Managers Only</td>
</tr>
<tr>
<td>Before training began</td>
<td></td>
<td>Participant Profile</td>
<td>All Managers &amp; Trainees</td>
</tr>
<tr>
<td>At first class</td>
<td></td>
<td>Pretest before training began</td>
<td>All Trainees</td>
</tr>
<tr>
<td>16–24 hours of training</td>
<td></td>
<td>Frontline Leadership Training</td>
<td>All Trainees</td>
</tr>
<tr>
<td>Last class after training</td>
<td></td>
<td>Posttest</td>
<td>All Trainees</td>
</tr>
<tr>
<td>4 weeks after training</td>
<td>3 Follow-up Surveys</td>
<td>3 Follow-up Surveys</td>
<td>All Trainees</td>
</tr>
<tr>
<td>4 weeks after training</td>
<td>2 Follow-up Surveys</td>
<td>2 Follow-up Surveys</td>
<td>All Managers</td>
</tr>
</tbody>
</table>

Instrumentation

Six instruments that assessed major variables were developed and employed as follows:

1. The Participant Profile which asked demographic information was given to the trainees and their managers in both groups.

2. The Trainees' Self-Report of Transfer of Training which asked about trainees' skill usage information as applied on the job was given to the trainees in both groups.
3. The Managers' Report of Transfer of Training which asked about the trainees' skill usage information as applied on the job was given to managers in both groups.

4. The Trainees' Report of the Transfer Environment which asked about the amount of training support provided by managers was given to the trainees in both groups.

5. The Managers' Report of the Transfer Environment which asked about the amount of training support provided by managers was given to the managers in both groups.

6. The Predisposition to Training which asked about the trainees' inclination to use their training was given to the trainees in both groups.

During the Frontline Leadership training intervention, the supervisor/team leader trainees were given a Participant Profile and a pretest before instruction began, a posttest at the end of the instruction, and three follow-up surveys 4 weeks after the training was completed. The three follow-up surveys were: (1) Trainees' Report of Transfer Environment, (2) Trainees' Self-Report of Transfer of Training, and (3) Predisposition to Training. Each of the trainees' managers were also given the Participant Profile and similar 4-week, follow-up surveys. The first instrument, the informational questionnaire, gathered demographic information on each of the participants and their managers. It included items such as age, race, gender, formal educational level, years of work experience, years employed at the company, previous training in the field, previous knowledge of Impact Mapping and possible reasons for the trainees to be attending the training (see Appendix D).

The pretest/posttest instruments were identical and consisted of 35 multiple-choice questions. The purpose of the pretest was to serve two functions: (1) furnish a
baseline of the participants' current knowledge so a comparison could be made with
the post-test for course content comprehension, and (2) provide an estimate of prior
understanding of course content between trainees reporting to Group A managers
and to those reporting to Group B. Having students take the pretest/posttest is part
of the standard procedure for the Frontline Leadership training.

The follow-up surveys were given 4 weeks after the training intervention and
gathered information on the trainees' and managers' reports of the transfer
environment and the transfer of training. The survey instruments were given to the
trainees and their managers to solicit a response of their perception of environmental
support by the managers and the transfer of training by the trainees. The majority of
the items on the transfer environment instrument were derived from work conducted
by Mary Broad in her 1982 study with ASTD chapter presidents. The items on the
transfer of training were constructed to maximize the validity of self-reports. Self-
ratings done on specific, behavioral actions are more accurate than those self-ratings
made on ambiguous scale anchors (Farh & Dobbins, 1989). Thus, self-report transfer
items were constructed to be as specific as possible (e.g., "when discussing job-
related activities, I allow time in the conversation for other’s concerns and personal
feelings"). Similarly, in order to improve the accuracy of the trainees' and managers’
responses (and minimize potential inflation), all responses were anonymous and all
completed surveys were returned directly to the researcher.

The follow-up surveys consisted of a Trainees' Report of Transfer
Environment, a Trainees' Self-Report of Transfer of Training, and a Predisposition to
Training instrument and were gathered from each of the trainees (see Appendix E). A
Managers' Self-Report of Transfer Environment and a Managers' Report of Transfer
of Training instrument (see Appendix F) were collected from each trainee’s
managers. These follow-up instruments collected quantitative data using a Likert-type scale for scoring.

Data Collection Process

Permission to conduct the study during the Frontline Leadership training at each of the three companies was granted by the HRD directors and plant managers before training began (January, 1997). Data for this study were collected by using the following process.

Participant Profiles were distributed to the 11 managers in the experimental Group B at the beginning of the Impact Mapping workshops during the spring semester of 1997. The researcher was present as they were being completed and collected the Profiles. First-line supervisors (61) were given the Participant Profile at the beginning of the Frontline Leadership training. Once again the researcher was present at the beginning of the training at each of the companies to distribute and collect the completed Profiles. The nine managers from comparison Group A were sent the Participant Profile along with the follow-up surveys and a letter of introduction about the study (this was the first contact made by the researcher to this group of managers) in early May 1997. They mailed the Profiles directly back to the researcher at the college's address.

Four weeks after the completion of training, the follow-up surveys were mailed directly to the managers and trainees at their home addresses using the regular U.S. Postal Service. Because of few returns, a second mailing was completed using the assistance of the HRD personnel in each of the companies. They distributed the surveys to the participants through regular interoffice channels. In some cases, e-mail or telephone messages were sent by management urging participants to complete the
surveys. The researcher made a follow-up phone call to any participant who did not respond after the second mailing.

A total of 81 participants began the study, 61 first-line supervisors and 20 managers. At the completion, 44 trainees and 18 of their managers provided data for the study. A total of 62 participants (supervisory trainees and their managers) concluded the study for a completion rate of 77%.

Managers from both groups A and B received surveys entitled Managers’ Report of the Transfer Environment and Managers’ Report of Transfer of Training. They were instructed to fill out survey forms for each of their direct reports that completed the training. A list of those direct reports were included in the cover letter and trainee names were attached to each of the surveys so the researcher could later compare the results with that of the trainees’ reports. Enclosed with the surveys was a cover letter briefly describing the study, assuring confidentiality of the given information, and explaining how the surveys were to be completed and returned directly to the researcher via the enclosed, postage paid envelope, included in the packet.

The trainees (first-line supervisors) from groups A and B received a Trainees’ Report of the Transfer Environment, a Trainees’ Report of the Transfer of Training, and a Predisposition to Training survey. They also received a cover letter briefly describing the study, assuring confidentiality of given information, and explaining how the surveys were to be completed and returned.

A four-digit code was assigned to each of the participants in the study. The first digit related to the company (Company 1, 2 or 3), the second digit to the category of participant (manager or trainee), and the last two digits were reserved for individual identification (01, 02, 03, etc.). For example, for a manager from Company
II, his or her code may look like this: "2168"; for a trainee from Company III, his or her code may look like this: "3245." This code was used to assure anonymity and confidentiality for the participants and was known only by the researcher.

Data Scoring Analysis

The five instruments that were developed to assess the nature of the training environment, the extent of transfer of training, and the predisposition for the trainees toward the usage of their training were scored and analyzed in the following ways:

1. Trainees' Report of the Transfer Environment and Managers' Report of the Transfer Environment. Two slightly modified versions of the same survey were used for the managers and trainees to elicit scores on the transfer environment. The trainees' scores referred to trainee's perception of the amount of support provided by the managers to create a positive transfer environment. The managers' scores referred to the amount of support they provided in creating a positive transfer environment. Participants answered 15 questions (numbers 1-15) on the transfer environment using a scale of 1 to 4, with 1 being "not at all" and 4 being "a great deal." The responses for each of the questions were summed to get a score for each participant on the transfer environment.

2. Trainees' Report of the Transfer of Training and Managers' Report of Transfer of Training. Two slightly modified versions of the same survey were used for the managers and trainees to elicit scores on the transfer of training. The trainees' scores referred to how much the trainees applied their new supervisory skills on the job. The managers' scores referred to how much the managers noticed their direct reports applying their new supervisory skills on the job. Participants answered 15 questions (numbers 1-15) on transfer of training using a scale of 1 to 5, with 1 being
"a lot less than before the training," 3 being "same frequency as before the training," and 5 being "a lot more than before training." The score value of some of the responses of the items on the transfer of training surveys were reversed. Items 2, 5, 6, 8, 11, 12, and 13 (see Appendices E and F) were written to elicit a negative response. In other words, if a participant circled "1" for "a lot less than before training," it was really worth the maximum number of points of 5 since it indicated a positive transfer environment factor. Items scored on each survey were summed to yield a single transfer score and transfer environment score, respectively.

3. Predisposition to Training. The scores on the Predisposition to Training survey was a self-report of the tendency or inclination of the trainees to use the new supervisory skills on the job. Trainees answered seven questions (numbers 16–22) on their predisposition to training using a scale of 1 to 4, with 1 being "not at all" and 4 being "a great deal." The responses for each of the questions were summed to get a score for each participant on the Predisposition to Training survey.

The individual scores were sorted by managers’ comparison Group A and experimental Group B and trainees’ comparison Group A and experimental Group B. Group mean scores were obtained and statistical tests were conducted using SPSS for Windows software.

Hypothesis Testing

The hypotheses that were tested and the statistical tests that were used are summarized below:

1. Mean score on managers’ self-report of environment support actions will be higher than the self-report score for the comparison group of managers. A $t$ test
for independent means was used with the null being tested at the .05 level of significance.

2. Mean score on trainees’ report of managers’ environment support actions will be higher than the score for the comparison group of trainees. A $t$ test for independent means was used with the null being tested at the .05 level of significance.

3. Mean score on managers’ report of trainees’ usage of training will be higher than the score of the comparison group of managers. A $t$ test for independent means was used with the null being tested at the .05 level of significance.

4. Mean score on trainees’ self-report of usage of training will be higher than the self-report score of the comparison group of trainees. A $t$ test for independent means was used with the null being tested at the .05 level of significance.

5. There will be a positive correlation between the mean of trainees’ report of managers’ environment support actions and the mean of managers’ self-report of transfer support actions. The product moment coefficient of correlation was used to determine a relationship.

6. There will be a positive correlation between the mean of trainees’ self-report of usage of training and the mean of managers’ report of trainees’ usage of training. The product moment coefficient of correlation was used to determine a relationship.
CHAPTER IV

ANALYSIS OF RESULTS

In this chapter, findings of the study are discussed as follows: (a) the population completing the study and their characteristics; (b) the survey response rate for the Participant Profile, Trainee’s Report of Transfer of Training, Trainees’ Report of Transfer Environment, Managers’ Report of Transfer of Training, and Managers’ Self-Report of Transfer Environment; (c) trainees’ predisposition to training; (d) testing of hypotheses; (e) additional testing; and, finally, (f) the summary of the results. For Hypotheses 1, 2, 3, and 4, tables of means and standard deviations for each variable and tables of results from an analysis of variance are presented. For Hypotheses 5 and 6, tables of results from Pearson product-moment correlations are presented.

Population

Three manufacturing companies in the Battle Creek area who requested Zenger Miller’s Frontline Leadership training for their first line supervisors were selected for this study. Company I is an automotive and recreational vehicle parts supplier; Company II produces ready to eat cereals; and Company III manufactures automotive engine, suspension, and transmission components. The companies vary in size from 100 to 900 employees.

After trainees (supervisors) were selected for the classes at the companies, the managers of all trainees were identified and randomly selected into either a
comparison Group A and an experimental Group B. The managers from Group B at each of the individual companies participate in an Impact Map workshop on the relationship of their supervisors' training to their company goals that was intended to help them create a more supportive environment for the transfer of training. After the Impact Mapping workshop was completed for experimental Group B managers, the Frontline Leadership training program was conducted for the supervisory trainees at each company. While the content for the Frontline Leadership program was essentially the same, the training varied in duration from 16 to 24 hours at the different companies, depending on their schedule constraints.

Sixty-one trainees (first-line supervisors) began the Frontline Leadership. Forty-four or 72% of them completed the training. Completion was defined as their presence in the final class and completion of the post test at the end of the training class. Companies I and III conducted their training over a 6- to 8-week time period resulting in 12 trainees completing at Company I (at a rate of 60.0%) and 17 trainees completing at Company III (at a rate of 65.2%). Company II held the training during one week resulting in a 100% retention rate for a total of 15 trainees completing. The total number of trainees completing the training was 23 (52.3% of the total trainees completing) in the comparison group and was 21 (47.7% of the total trainees completing) for the experimental group, making each group well balanced in size.

Twenty managers from the combined three companies had trainees participating in the Frontline Leadership training; 11 (55%) managers in the experimental Group B participated in the Impact Map workshop, and 9 (45%) managers in the comparison Group A received no special treatment. At the end of the training, 9 managers from Group A and 9 managers from Group B had trainees
completing training (2 managers in the experimental group had trainees who did not complete training, and were, thus, dropped from further study).

In summary, 61 supervisory trainees and 20 managers began the study for a total of 81 participants. At the completion, 44 trainees and 18 of their managers provided data for the study. A total of 62 participants (supervisory trainees and their managers) concluded the study for a completion rate of 77%.

Table 5 enumerates the number of participants by company in Groups A and B participating in the study and completing the training.

Table 5

Number of Participants and Completion Rates

<table>
<thead>
<tr>
<th>Companies</th>
<th>Trainees Beginning Training</th>
<th>Trainees Completing Training</th>
<th>Managers Beginning Study</th>
<th>Managers Completing Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company I</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Group A</td>
<td>9</td>
<td>5 (55%)</td>
<td>2</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>Experimental Group B</td>
<td>11</td>
<td>7 (64%)</td>
<td>3</td>
<td>2 (66%)</td>
</tr>
<tr>
<td><strong>Company II</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Group A</td>
<td>8</td>
<td>8 (100%)</td>
<td>5</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>Experimental Group B</td>
<td>7</td>
<td>7 (100%)</td>
<td>4</td>
<td>4 (100%)</td>
</tr>
<tr>
<td><strong>Company III</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Group A</td>
<td>17</td>
<td>10 (59%)</td>
<td>2</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>Experimental Group B</td>
<td>9</td>
<td>7 (78%)</td>
<td>4</td>
<td>3 (75%)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>61</td>
<td>44 (72%)</td>
<td>20</td>
<td>18 (90%)</td>
</tr>
</tbody>
</table>
Data Collection Instruments and Respondents

Instruments were developed to assess four major variables: (1) the demographic characteristics of the study participants, (2) the extent of transfer of the training (how much trainees applied their new supervisory skills on the job), (3) the actions taken by managers to create a positive transfer environment, and (4) the predisposition of the trainees toward the usage of their training. Six instruments that assessed these major variables were developed and employed as follows:

1. The Participant Profile which gathered demographic information was given to the trainees and their managers in both groups.

2. The Trainees' Self-Report of Transfer of Training, which asked about trainees' usage of training—acquired skills applied on the job—was given to the trainees in both groups.

3. The Managers' Report of Transfer of Training which asked about the trainees' usage of training—acquired skills applied on the job, as noticed by managers—was given to managers in both groups.

4. The Trainees' Report of the Transfer Environment which asked about the nature and extent of training support provided by managers was given to the trainees in both groups.

5. The Managers' Self-Report of the Transfer Environment which asked about the nature and extent of training support provided by managers was given to the managers in both groups.

6. The Predisposition to Training which asked about the trainees' inclination prior to the training to use their training was given to the trainees in both groups.
Each trainee completed one Self-Report of Transfer of Training, one Report of Transfer Environment, and one Predisposition to Training survey, while each manager completed one Report of Transfer of Training and one Self-Report of Transfer Environment for each of their direct reports. In other words, if a manager had only one direct report attending the Frontline Leadership training he or she would complete the instruments for that one individual; however, if a manager had five direct reports attending the training that manager would complete a Report of Transfer of Training and a Report of Transfer Environment for each of the five trainees. Therefore, data collected for each trainee consisted of: (a) Participant Profile (demographic information), (b) Trainees' Self-Report of Transfer of Training (changes in trainee's own behavior), (c) Managers' Report of Transfer of Training (changes in trainee's behavior that the manager observed), (d) Trainees' Report of Transfer Environment (changes in amount of training support from the managers that the trainees observed), (e) Managers' Self-Report of Transfer Environment (changes in amount of training support that managers provided), and (f) Predisposition to Training (inclination toward training completed by trainees only).

Participant Profile

The Participant Profile (Appendix D) demographic data were gathered for the purpose of comparing the experimental group and the comparison group on the variables of age, race, gender, educational level, years of employment with current company, supervisory experience, and amount of previous supervisory training. It was hoped that there would be little differences between the two groups and no significant differences were found.
Participant Profiles were given out on the first day of class at each of the companies to the trainees, sent out with the follow-up surveys to the managers in Group A, and at the Impact Map workshop for managers in Group B. Only 76 (93.83%) of the 81 participants taking part in the study received the Participant Profile because five of the trainees, one from Group A and four from Group B, were unavailable at the beginning of the classes when the surveys were distributed. A total of 70 (86.42%) surveys were completed and returned. Of these completed surveys, 41 (58.57%) were from the comparison Group A and 29 (41.43%) were from the experimental Group B. One of the subjects who did not complete the survey was from Group A and five were from Group B.

Differences were not found between Groups A and B in the eight categories of information collected from participants on the Participant Profile. *t* tests for independent means using an alpha level of significance of .05 were performed to compare the means for Group A and Group B. The findings of the characteristics for each group are delineated in Table 6.

As can be seen from Table 6, the Groups A and B were essentially the same when compared on the demographic variables.


The Trainees' Self-Report of Transfer of Training and Trainees' Report of Transfer Environment instruments were given to the 44 trainees completing the Frontline Leadership class, and the Managers' Report of Transfer of Training and Managers' Self-Report of Transfer Environment instruments were given to the 18 managers whose trainees completed the class. Trainees were considered to have
Table 6
Comparison of Means and Standard Deviations of Participant Profile Variables for Groups A and B

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Comparison Group A (n = 41)</th>
<th>Experimental Group B (n = 29)</th>
<th>Probability (2-tail) (n = 70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Mean = 35.8 (SD) = 10.686</td>
<td>Mean = 35.9 (SD) = 10.143</td>
<td>.965</td>
</tr>
<tr>
<td>Race</td>
<td>Caucasian = 34 82.9%</td>
<td>Caucasian = 21 72.4%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Africa. Amer. = 4 9.8%</td>
<td>Africa. Amer. = 2 6.9%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>No Response = 3 7.3%</td>
<td>No Response = 6 20.7%</td>
<td>NA</td>
</tr>
<tr>
<td>Gender</td>
<td>Male = 31 75.6%</td>
<td>Male = 21 72.4%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Female = 10 24.4%</td>
<td>Female = 8 27.6%</td>
<td>NA</td>
</tr>
<tr>
<td>Years of Education</td>
<td>Mean = 13.8 (SD) = 1.37</td>
<td>Mean = 12.8 (SD) = 1.562</td>
<td>.066</td>
</tr>
<tr>
<td>Years Employed by Company</td>
<td>Mean = 9.0 (SD) = 6.972</td>
<td>Mean = 10.8 (SD) = 8.018</td>
<td>.392</td>
</tr>
<tr>
<td>Years of Supervisory Experience</td>
<td>Mean = 4.0 (SD) = 4.997</td>
<td>Mean = 6.1 (SD) = 6.215</td>
<td>.172</td>
</tr>
<tr>
<td>Hours of Supervisory Training</td>
<td>Mean = 39.0 (SD) = 58.642</td>
<td>Mean = 28.0 (SD) = 34.750</td>
<td>.441</td>
</tr>
<tr>
<td>Pre/Posttest Scores</td>
<td>Pre Mean = 26.8 (SD) = 4.368</td>
<td>Pre Mean = 27.6 (SD) = 2.975</td>
<td>.470</td>
</tr>
<tr>
<td></td>
<td>Post Mean = 29.3 (SD) = 5.139</td>
<td>Post Mean = 29.5 (SD) = 3.626</td>
<td>.861</td>
</tr>
</tbody>
</table>

completed the training if they attended the final class and completed the posttest at the end of the training class. Of those trainees completing, 23 (52.27%) were in
comparison Group A and 21 (47.72%) were in experimental Group B. Nine managers (50%) were in each of Group A and B. The proportion of trainees completing training in each group made for an agreeable balance between the experimental and comparison groups.

Of the 62 surveys that were sent out, 44 to the trainees and 18 to the managers, 52 (83.87%) were returned and were used in the further analysis. Twenty-one (55.26%) trainees in Group A and 17 (44.74%) trainees in Group B completed and returned the surveys. Of the managers, 7 (50%) in each group completed and returned the Managers' Report of Transfer of Training. Six (46%) managers from Group A and 7 (54%) managers from Group B completed the Managers' Self-Report of Transfer Environment. Four of the participants who did not return the survey were from the comparison Group A and 6 were from the experimental Group B. One of the 6 trainees from Group B returned the Trainees' Report of Transfer of Training but did not complete one entire page; therefore, the information was incomplete and was not used in the analysis. Distribution of the number of surveys returned is shown in Table 7.

The transfer of training survey asked respondents to report on each of several specific skill application items using a scoring scale of 1 to 5, with 1 being "a lot less than before the training," 3 being "same frequency as before the training," and 5 being "a lot more than before training." The transfer environment survey asked participants to rate the extent to which they observed specific transfer support behaviors or factors using a scale of 1 to 4, with 1 being "not at all" and 4 being "a great deal."

The score value of responses of the items on the transfer of training surveys were reversed. Items 2, 5, 6, 8, 11, 12, and 13 (see Appendix E) were written to
Table 7  
Distribution of Transfer of Training and Transfer Environment Returned Surveys

<table>
<thead>
<tr>
<th>Surveys</th>
<th>Comparison Group A</th>
<th>Experimental Group B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees completing training</td>
<td>n = 23 (52.27%)</td>
<td>n = 21 (47.72%)</td>
<td>N = 44</td>
</tr>
<tr>
<td>Trainees completing the transfer of training and transfer environment surveys</td>
<td>n = 21 (55.26%)</td>
<td>n = 17 (44.74%)</td>
<td>N = 38</td>
</tr>
<tr>
<td>Managers whose trainees completed training</td>
<td>n = 9 (50%)</td>
<td>n = 9 (50%)</td>
<td>N = 18</td>
</tr>
<tr>
<td>Managers completing:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>transfer of training survey</td>
<td>n = 7 (50%)</td>
<td>n = 7 (50%)</td>
<td>N = 14</td>
</tr>
<tr>
<td>transfer environment survey</td>
<td>n = 6 (46%)</td>
<td>n = 7 (54%)</td>
<td>N = 13</td>
</tr>
</tbody>
</table>

elicit a negative response. In other words, if a participant circled “1” for “a lot less than before training” it was really worth the maximum number of points of 5 since it indicated a positive transfer environment factor. Items scored on each survey were summed to yield a single transfer score and transfer environment score, respectively. These scores are discussed under the heading of “Testing of Hypotheses” in this chapter.

Predisposition to Training

The Predisposition to Training survey investigated the predisposition of the trainees toward the training and its implementation. The purpose of the predisposition questions was to see if there was a tendency for one group or the other to be more motivated about or committed to the transfer of the training they had received. Seven

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items in the Trainees’ Report of Transfer Environment related to the trainees’ predisposition (see Appendix E).

The seven items asked about (1) the importance with which the trainees regarded the newly learned skills, (2) the commitment to using the new skills, (3) how qualified they felt they were to use the skills, (4) the amount of opportunity they had to use the skills, (5) the understanding of how the skills could lead to improved business outcomes, (6) the amount of confidence in handling their job after the training, and (7) the beliefs in how the training might contribute to improvements in their job results. The item scale choice score values ranged from 1 = “not at all,” to 4 = “a great deal.” Item scores were summed to produce a single predisposition scale score.

A t test for independent means was performed using the means of total scores from the seven predisposition questions of the two groups as the dependent variable. The purpose of this comparison was to see if the experimental group, as expected, was more predisposed to transfer their training (because of their managers participating in an Impact Map workshop). Such was not the case.

In all seven areas, no difference was found at the alpha level of .05 (see Table 4) indicating that there was no difference in the predisposition between the experimental Group B whose managers had an Impact Map workshop on how to create a supportive transfer environment and the comparison Group A whose managers received no workshop. Means and standard deviations for each items are portrayed in Table 8.
Table 8
Means and Standard Deviations of Predisposition of Training Questions

<table>
<thead>
<tr>
<th>Question: Since the training was completed…</th>
<th>Comparison Group A (n = 21)</th>
<th>Experimental Group B (n = 17)</th>
<th>Prob. (2-tail) (N = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Importance of supervisory skills and techniques presented</td>
<td>Mean = 3.191 (SD) = .680</td>
<td>Mean = 3.235 (SD) = .664</td>
<td>.839</td>
</tr>
<tr>
<td>17. Commitment to using the supervisory skills</td>
<td>Mean = 3.524 (SD) = .602</td>
<td>Mean = 3.353 (SD) = .493</td>
<td>.352</td>
</tr>
<tr>
<td>18. Qualified to practice the skills</td>
<td>Mean = 3.238 (SD) = .436</td>
<td>Mean = 4.882 (SD) = 7.532</td>
<td>.323</td>
</tr>
<tr>
<td>19. Opportunity to use actual skills</td>
<td>Mean = 3.143 (SD) = .727</td>
<td>Mean = 3.000 (SD) = .866</td>
<td>.584</td>
</tr>
<tr>
<td>20. Understanding of how skills lead to improved business outcomes</td>
<td>Mean = 3.714 (SD) = .561</td>
<td>Mean = 3.824 (SD) = .393</td>
<td>.502</td>
</tr>
<tr>
<td>21. Confidence in handling supervisory challenges on the job</td>
<td>Mean = 3.238 (SD) = .700</td>
<td>Mean = 3.352 (SD) = .702</td>
<td>.619</td>
</tr>
<tr>
<td>22. Improvement in job results</td>
<td>Mean = 2.667 (SD) = .796</td>
<td>Mean = 2.647 (SD) = .862</td>
<td>.942</td>
</tr>
</tbody>
</table>

Testing of Hypotheses

According to previous research and theoretical assumptions (as discussed in Chapter II), it was expected that those managers who participated in the Impact Map workshop would create a more supportive transfer environment and, in turn, their trainees would have a more positive predisposition toward the transfer of the training and, thus, use more of their training on the job. Table 9 shows a map and expected relationships.
Table 9
Experimental Group B Map and Expected Relationships

<table>
<thead>
<tr>
<th>Managers get IM Workshop</th>
<th>Managers help to create positive transfer environment</th>
<th>Trainees are more predisposed to transfer</th>
<th>Trainees actually apply more training</th>
</tr>
</thead>
<tbody>
<tr>
<td>A→</td>
<td>B→</td>
<td>C→</td>
<td>D</td>
</tr>
</tbody>
</table>

The expected correlations were as follows:

1. If A, then B. (IM Workshop and Positive Transfer Environment). If managers participated in an Impact Map workshop, then, they would create a positive transfer environment as reported by themselves (Hypothesis 1) and their trainees (Hypothesis 2).

2. If A, then D. (Main Hypotheses: IM Workshop and Applying More Training). If managers participated in an Impact Map workshop, then, their trainees would actually apply more of their training to the job, as reported by their managers (Hypothesis 3) and the trainees themselves (Hypothesis 4).

3. If B, then C. (Transfer Environment and Predisposition). If managers create a positive transfer environment, then, trainees are more inclined to transfer their training to the job site.

4. If C, then D. (Predisposition and Transfer of Training). If trainees are predisposed to transfer their training to the job site, then, they will actually apply more of their training to the job.

The first expected correlation (A→B) is a hypothesis from this study and will be discussed thoroughly under “Hypotheses 1 and 2” in this chapter. The second expected outcome (A→D) is the main hypothesis of this study and will be discussed...
in the proceeding section under “Hypotheses 3 and 4.” Expected correlations 3 and 4 will be discussed under the heading “Additional Tests.”

**Hypotheses 1 and 2**

Hypothesis 1 predicted that managers’ scores on reports of their own actions in helping to create a supportive transfer environment would differ, such that the experimental Group B environmental transfer scores would be higher than the environmental transfer scores for the comparison groups of managers. Hypothesis 2 predicted that trainees’ scores on reports of their managers’ actions to create a supportive transfer environment would differ, such that the experimental Group B environmental transfer scores would be higher than the environmental transfer scores for the comparison groups of trainees. In other words, managers who attended the Impact Map workshop and their trainees would both report higher for a more supportive training environment than managers and their trainees who did not attend the workshop. To test these hypotheses, the mean scores for each group of managers and their trainees were compared, using a $t$ test for independent means.

The purpose for this comparison was to see if the experimental group of managers and their trainees would report (because of the Impact Map workshop received by managers) more actions by the managers to create a supportive transfer environment ($A \rightarrow B$, see Table 9). The experimental group of managers reported a more supportive transfer environment, but their trainees reported a transfer environment no different from the comparison group.

Trainees and their managers reported on transfer conditions and environment managerial actions to create a positive transfer environment before the training.
(questions 1–4), during the training (questions 5–9), and after the training (questions 10–15) (see Appendixes E and F for survey questions).

A difference was found between the comparison Group A managers' report of the transfer environment and the experimental Group B managers' report of the transfer environment ($p = .003$, alpha = .05). That is the experimental group of managers who had the Impact Map workshop on linking training to company goals and creating a supportive transfer environment produced higher scores on Managers' Self-Report of Transfer Environment than the comparison group who did not have the workshop (means = 44.684 and 35.316, respectively). This difference indicates that managers who received the Impact Map training did more to create a transfer environment than did managers who did not receive the Impact Map training (see Table 10.)

With regard to whether the trainees from the experimental Group B produced higher scores than the comparison Group A on their report of the transfer environment, a difference was not found ($p = .380$, alpha = .05). In other words, there was no statistical difference between transfer environment reported by trainees' whose managers received the Impact Map workshop and the transfer environment amount reported by trainees whose manager did not attend the workshop. The probabilities, means, and standard deviations for the managers' and trainees' scores on supportive environmental actions are depicted in Table 10.

The findings on this comparison were contradictory. Managers who attended the Impact Map workshop said they took actions to create a more positive transfer environment, but, these actions were not noticed by the trainees.
Table 10

Probabilities, Means, and Standard Deviations of Trainees' and Managers' Scores on Supportive Environmental Actions

<table>
<thead>
<tr>
<th>Participants</th>
<th>Prob. (1-tail)</th>
<th>Comparison Group A</th>
<th>Experimental Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers' report on supportive</td>
<td>.003</td>
<td>Mean = 35.316 (SD) = 9.741</td>
<td>Mean = 44.684 (SD) = 8.413</td>
</tr>
<tr>
<td>environmental actions</td>
<td>(N = 38)*</td>
<td>(n = 19)</td>
<td>(n = 19)</td>
</tr>
<tr>
<td>Trainees' report on supportive</td>
<td>.380</td>
<td>Mean = 30.667 (SD) = 13.128</td>
<td>Mean = 34.471 (SD) = 13.101</td>
</tr>
<tr>
<td>environmental actions</td>
<td>(N = 38)*</td>
<td>(n = 21)</td>
<td>(n = 17)</td>
</tr>
</tbody>
</table>

*N = number of returned survey reports

Hypotheses 3 and 4

Hypothesis 3 predicted that the experimental Group B managers' scores on report of their trainees' transfer of training would be higher than the transfer scores of the comparison group of managers. Hypothesis 4 predicted that the experimental Group B trainees' scores on report of their own transfer of training would be higher than the transfer scores of the comparison group of trainees.

The purpose for this comparison was to see if Group B trainees, whose managers received the Impact Map workshop, applied their new Frontline Leadership skills on their jobs (as reported by the trainees themselves and their managers) more than Group A trainees whose managers did not receive the workshop (A → D, see Table 9). To test these hypotheses, the mean transfer of training scores for each group of trainees and managers were compared, using a t test for independent means.

A difference was found between the comparison Group A managers' report of the transfer of training and the experimental Group B managers' report of the
transfer of training \((p = .002, \alpha = .05)\). The experimental group who had the Impact Map workshop reported higher transfer scores than the comparison group who did not have the workshop (mean = 52.895 and 46.750, respectively). That is, those managers who had the Impact Map workshop reported observing more transfer of training to the job site by their trainees than the managers who did not have the Impact Map workshop.

A difference was not found, however, in trainees self-report of transfer. The trainees from the experimental Group B did not report higher usage than the comparison Group A on their assessment of the transfer of training. No difference was found \((p = .440, \alpha = .05)\) between comparison Group A and experimental Group B. In other words, those trainees whose managers received the Impact Map workshop reported no more usage of training than those trainees whose manager did not attend the workshop.

Once again, the findings on this comparison were contradictory. Managers who attended the Impact Map workshop reported observing more transfer actions by their trainees but, these greater transfer actions were not reported by their trainees.

The probabilities, means and standard deviations for the managers’ and trainees’ scored on the transfer of training are portrayed in Table 11.

**Hypothesis 5**

Hypothesis 5 predicted that there would be a positive relationship between trainees’ report of supportive environment actions taken by their managers and managers’ self-report of supportive environment actions. This hypothesis predicted that managers and trainees would agree on whether a more positive transfer climate
Table 11
Probabilities, Means, and Standard Deviations of Trainees' and Managers' Scores on Usage of Training

<table>
<thead>
<tr>
<th>Participants</th>
<th>Prob. (1-tail)</th>
<th>Comparison Group A</th>
<th>Experimental Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers' report on usage of training</td>
<td>.002 (N = 39)</td>
<td>Mean = 46.750 (SD) = 3.323 (n = 20)</td>
<td>Mean = 52.895 (SD) = 7.600 (n = 19)</td>
</tr>
<tr>
<td>Trainees' report on usage of training</td>
<td>.440 (N = 37)</td>
<td>Mean = 51.450 (SD) = 12.918 (n = 20)</td>
<td>Mean = 54.235 (SD) = 7.579 (n = 17)</td>
</tr>
</tbody>
</table>

had been created. Trainees who reported a high score (meaning they perceived a positive transfer climate) for a supportive environment toward training would have managers who also reported a high score for a supportive environment and trainees who reported a low score for a supportive environment toward training would have managers who also reported a low score. To test this hypothesis, a Pearson product-moment correlation was computed using trainees' scores on supportive environment actions and managers' scores on supportive environment actions.

The correlation between the trainees' environment report and the managers' environment report was statistically significant ($r = .351, p < .05$). The data showed that trainees who rated the training environment as more supportive had managers who tended to report having taken actions to create a more supportive training environment and those trainees who rated the training environment as less supportive had managers who tended to report having taken fewer actions to create a supportive training environment. The correlation coefficient and probability of trainees' report of
transfer environment and managers’ report of training environment are portrayed in Table 12.

Table 12

<table>
<thead>
<tr>
<th>Scores</th>
<th>Correlation</th>
<th>Probability (1-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers’ and trainees’ report on transfer environment (N = 38)</td>
<td>$r = .351^*$</td>
<td>.019</td>
</tr>
</tbody>
</table>

*Significant at $p < .05$

**Hypothesis 6**

Hypothesis 6 predicted that there would be a positive relationship between trainees’ report of usage of training and their managers’ report of usage of training. This hypothesis predicted that managers and trainees would agree on the extent to which usage of the training had been applied in the work setting. That is, trainees who reported more usage or transfer of training would have managers who, likewise, noticed more usage or transfer of training and trainees who reported lower scores would have managers who reported lower scores. Similar to Hypothesis 5, a Pearson product-moment correlation was computed using trainees’ scores on usage of training and their manager’s scores on usage of training as the variables.

There was no relationship between these scores; thus, Hypothesis 6 was not supported. In other words, trainees and their managers did not agree on observations and reports of transfer of training. The correlation and probability of
the trainees' report of usage and the manager's report of usage are found in Table 13.

Table 13
Correlation Coefficient and Probability of Trainees' Report of Usage of Training and Managers' Report of Usage of Training

<table>
<thead>
<tr>
<th>Scores</th>
<th>Correlation</th>
<th>Probability (1-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers' and trainees' report on usage of training (N = 39)</td>
<td>$r = .223$</td>
<td>.099</td>
</tr>
</tbody>
</table>

Additional Tests

Because predictions between the major relationship of transfer environment and usage of training as reported by the trainees were inconclusive and contradictory to the managers' reports, the researcher explored the data further.

Two additional areas of research were conducted to further analyze the data. The first area was the expected relationship between trainees' predisposition toward transfer and the transfer environment; and, the expected relationship between trainees' predisposition and the transfer of training. The second area of further research was to reexamine the data for a relationship between transfer environment and transfer of training regardless of the managers receiving the Impact Map workshop. According to the trainees' reports, the IM workshop seemed not to affect the transfer environment, the trainees' predisposition, nor the transfer of training. If by excluding the Impact Map variable and regrouping the data, would a relationship be found between trainees' reports of transfer environment and transfer of training?
For the first investigation, it was expected that there would be a relationship between a positive transfer environment and the trainees' predisposition to use the skills learned during the training (B→C, see Table 9). However, no relationship was found between a positive transfer environment and trainee's predisposition ($p = .273$, alpha $= .05$). There was no relationship between trainees' reports of managers' action in creating a positive transfer environment and trainees' reports of their inclination to use the training. It was expected that if trainees noticed their managers doing things that would be supportive of transfer of training, then, they (the trainees) would be more predisposed to use or transfer the newly learned skills to the job. Such was not the case. However, there was a strong relationship between trainees who were more predisposed to transfer and trainees who actually applied more of the training ($r = .723$, $p < .05$) (C→D, see Table 9). The correlation and probability of trainee's predisposition and the transfer environment and transfer of training variables are found in Table 14.

Table 14
Correlation Coefficient and Probability of Experimental Group B Trainee's Predisposition

<table>
<thead>
<tr>
<th>Scores</th>
<th>Correlation</th>
<th>Probability (2-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainee predisposition and transfer environment ($N = 17$)</td>
<td>$r = -.291$</td>
<td>.273</td>
</tr>
<tr>
<td>Trainee predisposition and transfer of training ($N = 17$)</td>
<td>$r = .723^*$</td>
<td>.001</td>
</tr>
</tbody>
</table>

*Significant at $p < .05$
For the second area of additional research, trainee data were resorted to create two "new" experimental groups. Trainees were sorted, regardless of their managers' participation in an Impact Map workshop, into groups that included:
(a) those trainees who reported a more supportive transfer environment, and
(b) those trainees who reported more usage of training. The resorted data were intended to identify those trainees who reported a more positive transfer environment and those trainees who reported greater usage of training, regardless of whether their managers received the Impact Map workshop or not. This comparison was to explore whether, as predicted in previous research, a relationship existed between a supportive transfer environment and greater transfer of training. It may have been the case that the Impact Map workshop had little effect on the creation of a positive transfer environment, but that some managers took positive actions regardless of the researcher's interaction with only the experimental Group B managers. A Pearson product-moment correlation was computed using all trainees' scores on transfer environment and all trainees' scores on usage of training.

There was no relationship between the scores of how much the trainees reported observing their managers' actions in creating a supportive environment and the trainees' reports of transfer of training, contradicting other's research findings (Broad, 1982; Burke, 1996; Clark, 1990; Cohen, 1990; Georgenson, 1982; Huczynski & Lewis, 1980; Noe, 1986; Rouillier & Goldstein, 1993; Van Velsor & Musslewhite, 1986; Zayed, 1994; Zemke & Gunkler, 1985). The correlation and probability of the trainees' report of usage and the trainees' report of transfer environment are found in Table 15.

Continuing to use the resorted data which included all trainees, regardless of whether their managers received the Impact Map workshop or not, an additional
Table 15  
Correlation Coefficient and Probability of Trainees' Report of Usage of Training and Transfer Environment

<table>
<thead>
<tr>
<th>Scores</th>
<th>Correlation</th>
<th>Probability (1-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees' report on usage of training and transfer environment (N=38)</td>
<td>r = .023</td>
<td>.446</td>
</tr>
</tbody>
</table>

analysis was conducted that was less influenced by self-report biases. Because the managers reported on their own actions in helping to create a supportive transfer environment and trainees reported on their own usage of the Frontline Leadership training, these data were not used. Only the transfer environment reports from trainees (observation of their managers' actions in creating a positive transfer environment) and the transfer of training reports from managers (observations of their trainees' transfer of skills to the work setting) were compared. The likelihood of self-report bias was reduced; that is, one could assume that of two measures of transfer, the trainees' reports of transfer would be less reliable than their managers' report of transfer and the managers' reports of environment would be less reliable than their trainees' reports of environment.

It was predicted that there would be a positive relationship between the trainees' reports on the transfer environment and the managers' reports on the transfer of training. To test this, a Pearson product-moment correlation was computed using trainees' scores on supportive environment actions of the managers and managers' scores on usage of training by the trainees.

The correlation between the trainees' environment report and the managers' usage report was statistically significant (r = .329, p < .05). The data showed that
those trainees who perceived a more positive transfer environment were reported by their managers to have applied more of the Frontline Leadership skills on the job.

By using managers' reports of trainee transfer of training and trainees' reports of managers' actions in creating a positive transfer environment, a relationship was found between transfer environment and transfer of training, consistent with other research findings (Broad, 1982; Burke, 1996; Clark, 1990; Cohen, 1990; Georgenson, 1982; Huczynski & Lewis, 1980; Noe, 1986; Rouillier & Goldstein, 1993; Van Velsor & Musslewhite, 1986; Zayed, 1994; Zemke & Gunkler, 1985).

The correlation coefficient and probability of trainees' reports of transfer environment and managers' reports of training usage are found in Table 16.

### Table 16

Correlation Coefficient and Probability of Trainees' Report of Transfer Environment and Managers' Report of Training Usage

<table>
<thead>
<tr>
<th>Scores</th>
<th>Correlation</th>
<th>Probability (1-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees' report on transfer environment and Managers' report on training usage</td>
<td>$r = .329^*$</td>
<td>.050</td>
</tr>
</tbody>
</table>

$N = 38$

*Significant at $p < .05$

Trainees who rated their manager's actions as more supportive in creating a better transfer environment had managers who rated their trainees as using more of the skills on the jobs and trainees who rated their manager's actions as less supportive in creating a better transfer environment had managers who rated their trainees as using fewer skills on the job.
Summary

In conclusion, a difference was found between the comparison Group A managers’ report of the training environment and the experimental Group B managers’ report of the training environment but no difference was found in the expected direction of the comparison Group A trainees’ report of the training environment and the experimental Group B trainees’ report of the training environment (Hypotheses 1 and 2, respectively). A difference was found between the comparison Group A managers’ report of the usage or transfer of training and the experimental Group B managers’ report of the usage; however, a difference between the comparison Group A trainees’ report of the transfer of training and the experimental Group B trainees’ report of the transfer was not found (Hypotheses 3 and 4, respectively). The data showed a slight relationship between the trainees’ environment report and their manager’s environment report (Hypothesis 5). Finally, no relationship was found between the trainees’ scores on the transfer of training and their manager’s score on the transfer of training (Hypothesis 6).

Because of the differences in the findings between trainees and their managers in Hypotheses 1, 2, 3, and 4, additional analyses were conducted. The data were regrouped to exclude the Impact Map workshop variable. Then the researcher examined the relationship between all trainees’ predisposition of transfer environment and the relationship between all trainees’ predisposition of transfer of training. No relationship was found between disposition and environment, however, a positive relationship was found between trainees’ disposition and trainees’ report of transfer of training.
Additional tests were conducted using resorted data, intending to identify those trainees who reported a more positive transfer environment and those trainees who reported greater usage of training, regardless of whether their managers received the Impact Map workshop or not. Once again, no relationship was found between the trainees' report on the actions of their managers in creating a supportive transfer environment and the trainees' self-report of usage of training.

Reducing the likelihood of self-report bias, all self-report surveys were eliminated and only the trainees' transfer environment reports and the managers' transfer of training reports were compared. Finally, the data showed a relationship between trainees' reports on the transfer environment and the managers' reports on the usage of training.
CHAPTER V

DISCUSSION AND CONCLUSIONS

The purpose of this study was to investigate the effect the transfer environment, created by the managers who understood how training links to company goals, had on trainees' transfer of skills learned in the classroom to the work site. The study proposed that a more supportive transfer environment could be created and thus induce more usage of training in the work setting, by teaching managers of the Frontline Leadership trainees to (a) understand the relationship between employee training and company strategic direction, (b) inform their trainees about this specific relationship between the training they receive in the classroom and the company goals, and (c) exhibit an interest in what happens before, during, and after the training so that the transfer of training would be greater than if managers had not received the goal/training connection information. This chapter includes an overall summary and an interpretation of major findings, along with recommendations for future studies.

Overall, differences were found between the experimental group of managers in both their reports of actions toward creating a supportive transfer environment and their reported observations of trainees' usage of new skills on the job. As predicted, those managers who were given the Impact Map training reported using more actions to create a supportive transfer environment and reported noticing more usage of the new Frontline Leadership skills by their direct reports than those managers who did not receive the training. However, when trainees themselves were asked similar
questions, this study provided no evidence that the experimental group of trainees noticed more actions by their managers to help create a supportive transfer environment nor could it provide evidence that the experimental group of trainees reported using their new Frontline Leadership skills on the job more than the comparison group of trainees. In addition, this study found a low correlation between trainees' and managers' reports of environment and no relationship between trainees' and managers' reports of usage of training. These findings will be discussed in this chapter.

Hypothesis Testing

The major hypotheses of this study—that trainees and their managers who attended the Impact Map workshop (aligning training content to the business's strategic plan) would report more actions by the managers in creating a supportive transfer environment (Hypotheses 1 and 2) and would report more usage of the training in the work setting by the trainees (Hypotheses 3 and 4) than trainees and their managers who did not attend the workshop—could be supported only when viewed from the perspective of the managers. Managers from the experimental group reported taking more supportive actions to create a better transfer environment and noticed their trainees using more of the newly learned skills than did the comparison group of managers. In other words, managers trained in the Impact Map workshop reported engaging in more transfer-enhancing behaviors and reported seeing more transfer of training by their employees. This was as expected and confirms qualitative findings of several other successful training strategists (Bolt, 1985; Brinkerhoff & Gill, 1994; Carnevale, 1990; Casner-Lotto & Associates, 1988; Galagan, 1990; McManis & Leibman, 1988; Roscow & Zager, 1988).
On the other hand, the conceptual hypothesis for the trainees' feedback on transfer environment and usage of training could not be supported by the test results. It was not possible to draw conclusions about any differences between the experimental group of trainees (meaning those trainees whose managers attended the Impact Map workshop) and the comparison group of trainees regarding both the trainees' report of usage of training and the trainees' observations of managers' action in creating a supportive transfer environment, even though their managers reported observing greater usage for the experimental group of trainees.

In addition, the secondary hypotheses of predicting a positive relationship between trainees' and managers' report of supportive environment actions (Hypothesis 5) and a positive relationship between trainees' and managers' report of usage of training (Hypothesis 6) were substantially low and nonexistent, respectively.

The following general explanations will attempt to clarify the trainees' inconclusive evidence. The first possible reason for the lack of findings is the impact the Frontline Leadership training had on the trainees and their usage of the training. The second is the implementation of the Impact Map workshop by the managers resulting in observable actions for a positive transfer environment. Finally, as a result of the additional analyses of the entire group of trainees and their managers, the third and fourth directions for interpretation are variability of trainees' reports and self-report biases.

Before considering the general observations about the inconclusive evidence, a positive outcome of the study will be mentioned. The good news about the Frontline Leadership training is that both groups of trainees reported more usage of the supervisory skills after the training than before the training. On a scale of 1–5 with 1 being “a lot less than before training” and 5 being “a lot more than before
training.” the experimental group’s mean score for individual transfer questions was 3.62 and the comparison group’s mean was 3.43. There was no statistical difference between the two groups, as was discussed and shown on Table 6 in Chapter IV, but both groups reported above the mean of 2.5 for individual questions on the survey for amount of usage of training in the work setting. This benefits the companies who participated in the training and invested their training dollars to provide the training. Nevertheless, the benefit does not explain the lack of support for the hypotheses which will now be discussed.

The first, general explanation pertains to the Zenger Miller Frontline Leadership training curriculum that was delivered to the trainees. It is a very practical and effective tool for instructing first-line supervisors. As part of the delivery of supervisory information, the Frontline Leadership program utilizes case studies, actual job problems from trainees’ work setting, group discussions, questions and answers sessions, skill building/role playing opportunities, and coaching. Several researchers (Huczynski, 1978; Stiefel, 1974) cite the presence of these training components as having a positive impact on the transfer of training. Furthermore, the Frontline Leadership course content presents practical, everyday skills that can be used immediately on the job site and many of the skills can even transfer into a trainee’s personal life. It is proposed that because of curriculum design and content skills, the Frontline Leadership training was powerful enough in its own right to produce trainees from both the experimental and comparison groups who used the skills to the extent that there was failure to observe predicted differences between the two groups.

The second explanation for a lack of differences especially between the trainees’ observed actions of the managers in helping to create a supportive transfer
environment could be the implementation phase of the Impact Map workshop by the managers. Either the managers did not learn the process of linking training to company goals or they did not properly implement the information to the extent that their direct reports noticed them sharing and using the new behaviors before, during, and after the training.

Given the size and format of the workshop it is unlikely that the managers did not learn the material. There were only three or four people in each of the workshops, a large part of the class was devoted to actually creating an Impact Map for the Frontline Leadership training, and participants had plenty of time to ask questions if they were not clear on the process. At the end of the workshop the presenter asked each manager if they understood and could commit to using the Impact Map with their trainees. All managers replied in the affirmative. The presenter and the researcher also offered to be available by phone if the managers had any problems or questions after the workshop.

It is more likely that the managers possibly did not use or were prevented from using what they had learned from the Impact Map workshop to the extent that it was more noticeable for the experimental group of trainees than for those trainees whose managers did not take the workshop. There are a variety of reasons for the lack of implementation.

First of all, at the companies the Impact Map workshops were conducted less than a week before the Frontline Leadership training began. Schedules were such that the managers, workshop presenter, and researcher could not meet until the week before, along with the fact that the training was scheduled with very little lead time. This short time frame pressured the managers to meet promptly with all of their direct reports (this number varied from manager to manager, with one manager
having 12 direct reports) before the training began. In some cases, the contact might not have been made, as seen from the results of the surveys, because the manager had too many trainees to contact. Secondly, the manager’s and trainee’s work load might have been a detriment to the trainees noticing their managers’ follow through of the skills learned in the Impact Map workshop. Production demands take priority over everything else, except for, perhaps, safety, in a manufacturing setting. With the limited time frame between the Impact Map workshop and the Frontline Leadership training, other tasks might have taken on a higher priority and trainees might have focused solely on work issues. Finally, the managers may have received little, if any, support from their superiors in helping to transfer the skills they learned during the Impact Map workshop. Without a positive transfer environment, it is difficult to implement newly learned skills.

Another explanation for the lack of differences between the comparison group and the experimental group is the possibility that the Impact Map was not a strong enough treatment and a more positive transfer environment was not created. If a supportive transfer environment had been created, the trainees’ reports should have reflected noticing some difference. It is a possibility that the managers’ actions were not intense (hard) enough or sustained for a long enough amount of time to create a positive phenomenon with in the perception of the trainees.

In conclusion, failure to observe predicted differences between the reports of the experimental and the comparison groups of trainees is most likely due to (a) the strong impression the Frontline Leadership training had on both groups of trainees, (b) the managers’ deficiency in implementing the Impact Map workshop skills, and (c) the possibility of the Impact Map treatment being too weak of an intervention to have an effect that is noticeable by trainees.
Additional tests were conducted to further analyze the data. The first area was the expected relationship between trainees' predisposition toward transfer and the transfer environment; and, the expected relationship between trainees' predisposition and the transfer of training.

It was expected that if trainees noticed their managers doing things that would be supportive of transfer of training, then, they (the trainees) would be more predisposed to use or transfer the newly learned skills to the job. Such was not the case. However, there was a strong relationship between trainees who were more predisposed to transfer and trainees who actually applied more of the training.

The second area of further research was to reexamine the data for a relationship between transfer environment and transfer of training regardless of the managers receiving the Impact Map workshop. According to the trainees' reports, the IM workshop seemed not to effect the transfer environment, the trainees' predisposition, nor the transfer of training. Trainee data were resorted to create two "new" experimental groups.

Trainees were sorted, regardless of their managers' participation in an Impact Map workshop, into groups that included (a) those trainees who reported a more supportive transfer environment, and (b) those trainees who reported more usage of training. The resorted data were intended to identify those trainees who reported a more positive transfer environment and those trainees who reported greater usage of training, regardless of whether their managers received the Impact Map workshop or not. There was no relationship between the scores of how much the trainees reported observing their managers' actions in creating a supportive environment and the trainees' self-reports of transfer of training.
Continuing to use the resorted data which included all trainees, regardless of whether their managers received the Impact Map workshop or not, an additional analysis was conducted that was less influenced by self-report biases. Only the transfer environment reports from trainees (observation of their managers' actions in creating a positive transfer environment) and the transfer of training reports from managers (observations of their trainees' transfer of skills to the work setting) were compared and the likelihood of self-report bias was reduced. The data showed that those trainees who perceived a more positive transfer environment were reported by their managers to have applied more of the Frontline Leadership skills on the job.

This was a very positive finding because it supports the previous body of research and validates this present study. Trainees who noticed more support given by their managers actually transferred more training to the work site as reported by their managers. Trainees who noticed less support from their managers actually transferred less training as reported by their managers. Managers' support of the transfer environment effects the usage of training by the trainee.

Recommendations for Future Research

While some of the findings of this study supported the hypotheses, others did not and need further exploration. Several directions could be explored.

The ability to generalize the results of this study beyond the three companies that were investigated is limited. Therefore, duplicating a similar study at other organizations including retail, health care, and governmental organizations, etc. would broaden the scope of the findings and, hopefully, validate the results of this
study. Not only could various types of organization be included but the locations
could be broaden by expanding to other counties or states.

Rather than conducting training in Frontline Leadership where behaviors are
challenging to measure, perhaps, a more technical skill could be used. For instance,
safety training for blood born pathogens where trainees have to physically wear
protective gear or statistical process control using graphs and charts would be easier
courses to measure outcome behaviors.

Another approach for further research would be to expand the focus of the
transfer of training reports and create a more positive transfer environment for the
managers' newly learned skills from the Impact Map workshops. The trainees'
subordinates who observe the behavior of their supervisors on a regular basis, could
be used to evaluate the trainees' (supervisors') usage of the training. This would
increase the amount of feedback information from, not only, the managers and
trainees (self-reports), but from the people who are being supervised, thus, adding
another dimension to the research. Also, managers could be given more support in
creating a positive transfer environment by having periodic follow-up contacts from
the researcher and consultant who presented the Impact Map workshop.

Several recent research studies stressed the importance to train managers and
supervisor pertaining to their role in creating a more positive transfer environment
(Ahn, 1994; Legut, 1995; Sawczuk, 1990). This study used one technique called
Impact Mapping, having managers learn how to link training to company goals and
creating more support for the training because of its impact on the company’s
strategic direction. Expanded training of this model or other such training models are
needed to motivate management to better assist in the transfer of training.
Summary

The findings of this study suggest the importance of managers knowing how training ties to the corporate strategic direction. This knowledge can become a motivating factor for managers in helping to create a more supportive transfer environment for trainees when implementing the information learned during training. Overall differences were found between the experimental group of managers in both their self-reports of actions toward creating a supportive transfer environment and their reported observations of trainees' usage of new skills on the job. As predicted, those managers who were given the Impact Map training reported using more actions to create a supportive transfer environment and reported noticing more usage of the new Frontline Leadership skills by their direct reports than those managers who did not receive the training.

There was failure to observe predicted differences between the experimental and the comparison groups of trainees' reports for both transfer environment and usage of training. The lack of reported differences was most likely due to (a) the strong impression the Frontline Leadership training had on both groups of trainees, (b) the managers' deficiency in implementing the Impact Map workshop skills, and (c) the possibility of the Impact Map treatment being too weak of an intervention to have an effect that is noticeable by trainees.

However, in this study, a relationship was found when the resorted trainees' reports of the managers' actions in helping to create a positive transfer environment were compared to their resorted managers' reports of the trainees' usage of training. In other words, those trainees who noticed more actions by their managers, for creating a positive transfer environment, had managers who noticed more usage of
skills by their trainees and those trainees who noticed fewer actions by their managers had managers who noticed less skills being used by their trainees. A relationship was found between the trainees' reports of environment and the managers' reports of the transfer of training, supporting and furthering the empirical body of knowledge of usage of training in the workforce.

As companies continue to pursue ways of becoming more profitable and look to their workforce for higher productivity, this study would indicate that linking company goal information to training and sharing that information with employees (managers and trainees, especially) leads to better usage of the training. This would suggest that a more conscientious effort should be made to map each training activity to the strategic goals of the company and enable managers to help create a more supportive transfer of training environment.

In order for organizations to take advantage of these findings, the human resource community, and, particularly, customized training departments from the community colleges will have to inform companies of: (a) the importance of linking corporate strategies to training in creating a more supportive transfer environment, (b) the positive consequences of building a support system for trainees to use their newly learned skills, and (c) the need to train managers with skills to support the transfer efforts of their trainees.
Appendix A

Research Study Consent Form
Research Study Consent Form

Western Michigan University
Department of Educational Leadership

Principal Investigator: Dr. Robert O. Brinkerhoff
Research Associate: Elizabeth Benanzer

I have been selected to participate in a research project entitled “The Effect of Managers' Support in Linking Goals to Training and the Trainees' Ability to Transfer the Training.” The purpose of the proposed research is to study various factors that assist in the transfer of training from the classroom to the work environment. I further understand that this project is Elizabeth Benanzer’s dissertation project.

Participation in this research project involves:
1. Completion of an Participant Profile
2. Attending an Impact Mapping workshop if randomly selected
3. Completion of a Trainee’s Perception of the Transfer of Training (TPTT) questionnaire or a Manager’s Perception of the Transfer of Training (MPTT) questionnaire.

I understand that all the information collected from me is confidential. That means that neither my name nor my company's name will appear on any papers on which the information is recorded. The forms will all be coded and Elizabeth Benanzer will keep a separate master list with the names of participants and corresponding code numbers. Once the data are collected and analyzed, the master list will be destroyed. Only group data and not individual data will be reported in future reports or publications.

One way in which I may benefit from this activity is having the chance to participate in an Impact Mapping workshop and learning how training ties to our company goals. Also, I will have the opportunity to report on activities that take place before, during, and after training conducted at my company. This group information has the potential for improving the training environment for my work place.

As in all research, there may be unforeseen risks to the participant. If an accidental injury occurs, appropriate emergency measures will be taken; however, no compensation or treatment will be made available to me except as otherwise covered by my employer under normal working conditions.

I understand that I may refuse to participate or quit at any time during the study without prejudice or penalty. You may also refuse to sign and not participate in this research but still participate in the training workshop with no penalty. If I have any questions or concerns about this study, I may contact either Elizabeth Benanzer at 616-965-4137 or Dr. Robert Brinkerhoff at 616-387-3881. I may also contact the Chair of Human Subjects Institutional Review Board at 616-387-8293 or the Vice President for Research with any concerns that I have. My signature below indicates that I understand the purpose and requirements of the study and that I agree to participate.

Signature __________________________________________ Date ______________________

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Appendix B
Impact Map
### Impact Map

<table>
<thead>
<tr>
<th>Trainees</th>
<th>Knowledge &amp; Skills</th>
<th>Job Behaviors</th>
<th>Job Performance Indicators</th>
<th>Business Objectives</th>
<th>Strategic Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisors</td>
<td>▪ Basic Principles</td>
<td>▪ Accepting ownership for job results</td>
<td>▪ Use production issues for quality control and productivity improvement</td>
<td>▪ Reduce down time by 1/3</td>
<td>▪ Achieve 15 parts/million on quality</td>
</tr>
<tr>
<td></td>
<td>▪ Giving Constructive Feedback</td>
<td>▪ Consistent, positive reinforcement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Getting Good Information</td>
<td>▪ Open, direct and honest communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Question</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Listening</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Winning Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication Selling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Emotional Behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managers</td>
<td>▪ Conflict Resolution</td>
<td>▪ Listen, resolve, and eliminate production problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Negativity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Giving Positive Feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conducted by: Dennis Dressler, Training Strategies, & Elizabeth Benanzer, Kellogg Community College
Appendix C
Frontline Leadership Course Objectives
KELLOGG COMMUNITY COLLEGE
ZENGER MILLER FRONTLINE LEADERSHIP SKILL UNITS

CORE INTERPERSONAL SKILLS

Frontline Leadership: Your Role and The Basic Principles

Gives an overview of the expanding role of supervisors and managers and why the need for their personal skill development has never been greater. Overviews the Frontline Leadership program and covers the "Basic Principles" of maintaining positive work relationships as the foundation of all skills in the program.

Participants will become familiar with the Basic Principles and achieve the following:

1. Focus on the situation, issue, or behavior, not on the person.
2. Maintain the self-confidence and self-esteem of others.
3. Maintain constructive relationships with your employees, peers, and managers.
4. Take initiative to make things better.
5. Lead by example.

Giving Constructive Feedback

Builds skill at delivering objectives, honest feedback in a coherent fashion that will be relevant and useful to employees.

Participants will learn the following Key Actions:

1. State the constructive purpose of your feedback.
2. Describe specifically what you have observed.
3. Describe your reactions.
4. Give the other person an opportunity to respond.
5. Offer specific suggestions.
6. Summarize and express your support.

Getting Good Information From Others

Discusses the value of good information in making better decisions. Covers how to gather in-depth information efficiently.

Participants will learn the following Key Actions:

1. Focus the discussion on the information needed.
2. Use open-ended questions to expand the discussion.
3. Use closed-ended questions to prompt for specifics.
4. Encourage dialogue through eye contact and expression.
5. State your understanding of what you are hearing.
6. Summarize and close the discussion.

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Winning Support From Others by Getting Your Ideas Across

Shows how to extend personal influence through mutual understanding, good listening and mutual benefits. Covers how to build and maintain supportive relationships to get things done.

Participants will learn the following *Key Actions*:

1. Establish mutual involvement in the situation.
2. Explain how your recommendation benefits others, the organization, and yourself.
3. Determine understanding and reactions.
4. Address the other person’s concerns.
5. Ask for the specific support you need.
6. Agree on an action plan.

Dealing With Emotional Behavior

Focuses on ways to diffuse nonconstructive emotional behavior in work situations and how to refocus energies toward positive, productive solutions to issues.

Participants will learn the following *Key Actions*:

1. Calmly acknowledge the emotional behavior.
2. Describe the impact the emotional behavior is having on you and on the discussion.
3. Determine if it’s possible to continue the discussion constructively.
4. Propose an approach for jointly refocusing on the work issue.
5. Express support and reassurance.

Recognizing Positive Results

Builds skills beyond giving basic feedback, by incorporating the motivating element of personal appreciation for a job done.

Participants will learn the following *Key Actions*:

1. Describe the results you are recognizing as specifically and immediately as possible.
2. State why these results deserve your personal appreciation.
3. Close by reaffirming your recognition and continuing support.
Appendix D

Participant Profile
Participant Profile

Please fill in the following information and complete the questions below. All information will remain confidential and used for purposes of this study only.

Name: ____________________________________________________________

Home Address: ____________________________________________________

City: ___________________________ State: ______________

Zip: ______________

Phone Numbers: Home ________________

Office __________________________

Age: _____ Race: ________ Sex: _____ Last grade attended in school: _____

*********

1. How long have you been employed by this company?

______________________________

2. What is your current position at the company?

______________________________________________________________

3. How long have you been in this position?
   Years ________ Months __________

4. Have you had any training in Impact Mapping?
   Yes _______ No __________

5. Have you had any training in Supervisory Skills?
   Yes _______ No __________
   If you answered yes, how many hours have you had? ________ hours

6. Do you feel it is the role of the supervisor to create a work environment that enhances the transfer of training to the work site?
   Yes _______ No __________
   If you answered yes, what do you do to assist in the transfer. List below:

______________________________________________________________

______________________________________________________________

______________________________________________________________

Thank you for your cooperation and assistance.

Elizabeth Benanzer, Director, Customized Training, KCC
Appendix E

Trainees' Follow-up Surveys
Trainees' Report of the Transfer Environment

**Part One: Transfer Environment.** The following is a list of conditions that sometimes exist before, during, and after training. Please indicate, by circling the appropriate number on the response scale, the extent to which they apply to you regarding the Frontline Leadership Supervisory Training you participated in approximately four weeks ago.

When answering the questions, keep in mind the extent your manager provided support in the training environment. Use the following scale for rating your answers: 1 = Not at All, 2 = Somewhat, 3 = Very Much, 4 = A Great Deal. If there was little or no support, circle 1; a bit of support but sporadic, circle 2; satisfactory support but it could have been better, circle 3; and, considerable to exceptional support, circle 4.

<table>
<thead>
<tr>
<th>Before training, to what extent did your manager . . .</th>
<th>Not at All</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. tell you why you were selected for the training.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. brief you on the importance of the training in terms of course content.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. define for you how the training was linked to the goals of the company.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. discuss with you ways to apply the new behaviors you would be learning in the training.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>During the training, to what extent did your manager . . .</th>
<th>Not at All</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. monitor your attendance in the training sessions.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6. very clearly communicate to you his/her support for the training in which you were participating.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7. arrange to prevent work-related interruptions during the training.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8. participate in one of more of the training sessions.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9. directly ask you what you thought of the training.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
### After the training, to what extent did your manager . . .

<table>
<thead>
<tr>
<th></th>
<th>Not at All</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. discuss with you how you were planning to use the new skills on the job.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>11. review with you how the training would help the company reach its plant goals.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>12. coach you in using your newly acquired skills.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>13. encourage your attempts to apply your newly acquired skills.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>14. give you positive reinforcement for your demonstration of behaviors taught in the course.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>15. encourage a meeting of your co-workers to discuss skill/knowledge taught in the course.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

### Predisposition to Training

### Since the training was completed . . .

<table>
<thead>
<tr>
<th></th>
<th>Not at All</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. to what extent are the supervisory skills and techniques that were presented important to you.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>17. to what extent are you committed to using the supervisory skills.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>18. how qualified are you to practice the skills.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>19. did you have the opportunity to use the actual skills</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>20. do you understand how improved supervisory skills lead to improved business outcomes.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>21. do you feel more confident in knowing how to handle supervisory challenges on the job.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>22. do you notice measurable improvement in the results you are expected to produce within your scope of responsibility.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>
Trainees' Self-Report of the Transfer of Training

**Part Two: Transfer of Training.** These statements relate to how the skills you learned in the class are being used on the job. Please circle the number that is closest to your actions over the past four weeks. Be as honest as possible.

If you are practicing the behaviors a lot less than before the training, circle 1 or 2; if you are practicing the behaviors the same frequency as before the training, circle 2, 3, or 4; or if you are practicing the behaviors a lot more than before the training, circle 4 or 5. Remember, your answers are confidential.

<table>
<thead>
<tr>
<th></th>
<th>A lot less than before training</th>
<th>Same frequency as before training</th>
<th>A lot more than before training</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When an employee's performance is deficient, I've taken the initiative to discuss the problem with him/her before the problem had to be taken to a higher level.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. When talking to an employee about his/her job performance, I've used information I hear from others rather than directly observing the situation.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. When discussing job-related activities, I allow time in the conversation for other's concerns and personal feelings.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. When giving an employee feedback on their performance (i.e., attendance problems, messy work station, lack of quality charting, etc.), I describe how their behavior impacts the work environment.</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
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</tr>
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<td>5. When a chronic complainer comes to me, I take their concerns less seriously by considering the source of information.</td>
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<td>6. When we are behind in production, I focus on producing the product, giving that priority over the feelings and concerns of employees.</td>
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<td>13.</td>
<td>In an intense discussion where there is disagreement, I ask the employee's help in concentrating on the main points of our conversation.</td>
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</tr>
<tr>
<td>14.</td>
<td>When employees put great effort but achieve little results (i.e., machine is repaired in record time but production level very low), I verbally recognize their efforts.</td>
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<td>2</td>
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<td>15.</td>
<td>At times I say something to this effect, &quot;Listen, I don't have time to tell you why, let's just do it.&quot;</td>
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</tr>
</tbody>
</table>
Appendix F

Managers' Follow-up Surveys
Managers' Report of the Transfer Environment

**Part One: Transfer Environment.** The following is a list of conditions that sometimes exist before, during, and after training. Please indicate, by circling the appropriate number on the response scale, the extent to which they apply to you regarding the Frontline Leadership Supervisory Training that was conducted approximately four weeks ago.

Use the following scale for rating your answers: 1 = Not at All, 2 = Somewhat, 3 = Very Much, 4 = A Great Deal. If there was little or no support, circle 1; a bit of support but sporadic, circle 2; satisfactory support but it could have been better, circle 3; and, considerable to exceptional support, circle 4.

<table>
<thead>
<tr>
<th>Before training, to what extent did you . . .</th>
<th>Not at All</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. tell trainees why they were selected for the training.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>2. brief trainees on the importance of the training in terms of course content.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>3. define for trainees how the training was linked to the goals of the company.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>4. discuss with trainees ways to apply the new behaviors they would be learning in the training.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>During the training, to what extent did you . . .</th>
<th>Not at All</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. monitor trainees' attendance in the training sessions.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>6. very clearly communicate to trainees your support for the training in which they were participating.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>7. arrange to prevent work-related interruptions during the training.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>8. participate in one of more of the training sessions.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>9. directly ask trainees what they thought of the training.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>After the training, to what extent did you . . .</td>
<td>Not at All</td>
<td>A Great Deal</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>10. discuss with trainees how they were planning to use the new skills on the job.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>11. review with trainees how the training would help the company reach its plant goals.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>12. coach trainees in using the newly acquired skills.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>13. encourage trainees' attempts to apply the newly acquired skills.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>14. give trainees positive reinforcement for the demonstration of behaviors taught in the course.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>15. encourage a meeting of co-workers to discuss skill/knowledge taught in the course.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>
Managers' Report of the Transfer of Training

**Part Two: Transfer of Training.** These statements relate to how the trainees' skills learned in the class are being used on the job. Please circle the number that is closest to actions of your employee you have observed over the past four weeks.

If your employee has practiced the behaviors a lot less than before the training, circle 1 or 2; if they have practiced the behavior the same frequency as before the training, circle 3, 4, or 5; if they have practiced the behavior a lot more than before the training, circle 4 or 5. Be as honest as possible. Remember, your answers are confidential.

<table>
<thead>
<tr>
<th></th>
<th>A lot less than before training</th>
<th>Same frequency as before training</th>
<th>A lot more than before training</th>
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</thead>
<tbody>
<tr>
<td>1. When an employee's performance is deficient, the trainee has taken the initiative to discuss the problem with the employee before the problem had to be taken to a higher level.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. When talking to an employee about his/her job performance, the trainee used information heard from others rather than directly observing the situation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
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<td>3. When discussing job-related activities, the trainee allowed time in the conversation for other's concerns and personal feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>4. When giving an employee feedback on their performance (i.e., attendance problems, messy work station, lack of quality charting, etc.), the trainee described how their behavior impacted the work environment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5. When a chronic complainer comes to the trainee, the trainee takes their concerns less seriously by considering the source of information.</td>
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Appendix G

Human Subjects Institutional Review Board Approval Letter
Date: 8 April 1997

To: Robert Brinkerhoff, Principal Investigator
   Elizabeth Benanzer, Student Investigator

From: Richard Wright, Chair

Re: HSIRB Project Number 97-03-21

This letter will serve as confirmation that your research project entitled "The Effect of Managers’ Support in Linking Goals to Training and Trainees’ Ability to Transfer the Training" has been approved under the expedited category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: 8 April 1998
BIBLIOGRAPHY


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