MENTAL PRACTICE AND GOAL SETTING AS TRANSFER OF TRAINING STRATEGIES: THEIR INFLUENCE ON SELF-EFFICACY AND TASK PERFORMANCE OF TEAM LEADERS IN AN ORGANIZATIONAL SETTING

by

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A thesis submitted in conformity with the requirements for the Degree of Doctor of Philosophy,
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"We think of the mind as a storehouse to be filled when we should be thinking of it as an instrument to be used."

J. Gardner, 1965
ABSTRACT

A field experiment examined the effects of mental practice and goal setting, as post-training interventions, on both the transfer of newly learned communication skills and self-efficacy. Forty-one employees of a large Canadian pulp and paper mill participated in a one-day training program on communication skills after which they were randomly assigned to one of four transfer of training conditions, namely control group, goal setting, mental practice, and mental practice and goal setting. The participants in the three treatment conditions attended four one-hour transfer sessions while the control group was instructed to do their best to apply the skills they had been taught.

An ANCOVA, six months later, showed that self-efficacy at the end of the transfer intervention was significantly higher for the participants who engaged in mental practice than for those who did not. Hierarchical regression analysis indicated that the participants' imagery skills moderated the effect of mental practice on self-efficacy. Task knowledge prior to mental practice did not moderate the relationship between mental practice and self-efficacy. Paired t-tests revealed that the trainees in the mental practice conditions had significantly better communication behavior than those in the goal setting and control conditions.
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CHAPTER I
INTRODUCTION

The fundamental purpose of training is to help people develop knowledge, skills and abilities which, when applied at work, will enhance their performance. The concept of transfer of training refers to the degree to which trainees apply the learned skills to their job (Wexley & Latham, 1991). The transfer can either be positive (i.e., learning during training results in improved performance on the job), negative (i.e., learning during training results in a decrease in performance on the job), or zero (i.e., learning during training does not have any effect on performance). Considering that employer-sponsored training is a multibillion-dollar industry ("1995 Industry Report", 1995), there is a critical need for empirical research on the transfer of training.

Traditionally, researchers have concentrated their efforts on improving the design of training programs through the investigation of learning principles, namely identical elements, general principles, stimulus variability, and conditions of practice (Baldwin & Ford, 1988). While these transfer strategies developed from experimental psychology have value, Tannenbaum and Yukl (1992) argued that they have slowed down ways to increase positive transfer because they focus primarily on the period of skill acquisition that occurs during training.
According to these two researchers, a more appropriate strategy is to investigate the post-training period. Recent reviews of the training literature (Wexley, 1984; Latham, 1988; Tannenbaum & Yukl, 1992) indicate that there is still a paucity of studies that have tested the effectiveness of post-training interventions leading to positive transfer of training.

Latham and Seijts (1997) concluded that research on transfer of training has been limited by a mental model held by academics, namely, the belief that the solutions to transfer dilemmas can be found primarily in experimental psychology through additional research on identical elements, general principles, stimulus variability, etc. To address this issue, researchers, they argued, should investigate combinations of interventions from experimental psychology and other fields. This recommendation is consistent with the position taken by Baldwin and Ford (1988) in their seminal review of the transfer of training literature. That is, there is a need for transfer of training research to "take a more eclectic orientation toward transfer by focusing on a number of other literatures neglected by industrial-training researchers" (p. 98).

The literature in clinical, counseling, as well as sport psychology contain numerous studies that have investigated the value of "mental practice" as a cognitive training tool used to strengthen performance (Murphy, 1990; Neck & Manz, 1992). Moreover, cognitive approaches, such as mental practice, are
gaining popularity among organizations as valuable techniques to enhance, among other things, creativity, problem solving, listening skills and presentation skills (Bennett, Wheatley, Maddox, & Anthony, 1994; Sauers & Bass, 1993).

Mental practice is defined as the symbolic guided rehearsal of a task in the absence of any apparent physical movement (Richardson, 1967a). For example, when a person prepares for a presentation by mentally visualizing the steps required to perform it effectively, he or she is engaging in mental practice. The term “guided” implies that mental practice involves a detailed, step-by-step procedural script which teaches an individual how to perform a task successfully (Wheatley, Maddox, & Anthony, 1989).

There are at least three theoretical explanations of the effect of mental practice on performance. These include Hawthorne, psychoneuromuscular, and symbolic effects. The Hawthorne effect suggests that mental practice is an epiphenomenon, that is, the effect is simply due to attention. Recent empirical studies however, have refuted this explanation. Using equivalent control groups (i.e., a group engaging in some nontreatment activity for a period equivalent to the practice time of the treatment group), both Lee (1990) and Sapp (1994) found that mental practice had an effect on performance above the equivalent control group.
The psychoneuromuscular explanation maintains that "mental practice causes minute innervations to occur in the muscles that are actually used in the physical performance of the skill being learned ... [such] innervation is alleged to provide kinesthetic feedback to the learner, and thereby strengthens the motor program that governs the skill involved" (Driskell, Copper, & Moran, 1994, p. 489). However, this explanation which dates back to Jacobson (1932), does not hold in face of the pattern of results reported in the field in the past decade. A meta-analysis conducted by Driskell et al. (1994) revealed that "the degree to which the task involved more cognitive components was a significant predictor of the extent to which mental practice improved performance (r = .38, z = 4.46, p < .001)" (p. 485).

Finally, the symbolic explanation proposes that people develop a mental plan of the movements involved in a task (Richardson, 1967b). A plan improves subsequent performance because it gives "the performer the opportunity to rehearse the sequence of movements as symbolic components of the task" (Feltz & Landers, 1983, p. 45). This explanation is consistent with social cognitive theory.

Social cognitive theory (Bandura, 1986, 1997) states that behavior, cognition, and environmental events interact reciprocally. Central to the theory is the ability for forethought, that is, visualizing potential situations and their related outcomes. Such visualization is then translated into
incentives and guides for purposeful action through the influence of self-regulating mechanisms such as self-efficacy and goal setting (Bandura, 1991).

Using a cognitive-behavioral model of the mental practice process, Morin (1996) proposed that the effect of mental practice on task performance can be explained by the mediating effect of self-efficacy. Specifically, she argued that mental practice acts as enactive mastery, vicarious experience, and verbal persuasion, three sources of information that have been found critical to the development of self-efficacy (Bandura, 1986, 1997).

Enactive mastery refers to repeated performance accomplishments. Although it is usually assumed that enactive mastery refers to the actual enactment of a task, it has been suggested that people can create, and in essence, symbolically experience the completion of a task during a mental practice exercise (Manz, 1986, 1992).

Vicarious experience refers to the indirect experience acquired on a task by observing someone performing it (Wood & Bandura, 1989). Numerous studies of the effect of modeling on performance have revealed that people who observe a successful model develop higher self-efficacy beliefs than people who observe a non-successful model or people who do not observe any model (Earley & Kanfer, 1985; Gist, 1989; Gist, Schwoerer, & Rosen, 1987). The effect of modeling on self-efficacy beliefs
has also been found when the model was oneself as opposed to other people similar to the observer (Anderson, 1983; Dowrick & Hood, 1981; Gonzales & Dowrick, 1982). With respect to mental practice, it is argued that when people mentally rehearse a task, they see themselves performing the task and are thus exposed to the effect of modeling.

Mental practice can also act as verbal persuasion. This is because specific statements included in the mental practice script encourage people to believe that they can perform successfully the task being mentally rehearsed. Verbal persuasion in a mental practice exercise can also take the form of self-instruction or self-talk (Bandura, 1986), which refers to what we covertly tell ourselves (Ellis, 1962; Meichenbaum, 1974, 1977). This cognitive strategy has been shown to improve both performance (Manz, 1983, 1986, 1992; Manz & Sims, 1989) and self-efficacy beliefs (Millman & Latham, in press).

Finally, empirical evidence has shown that negative arousal (i.e., anxiety) is detrimental to the development of self-efficacy beliefs (Bandura, 1986). As noted previously, individuals who mentally rehearse a task experience symbolic enactive mastery and modeling which have been both shown to decrease substantially anxiety arousal. Further, mental practice can increase task-relevant information which clarifies the steps required to perform the task effectively, and thus contributes
to the formation of self-efficacy beliefs (Gist & Mitchell, 1992).

The implications of the above reasoning suggest that mental practice may lead to a significant positive transfer of training through an increase in self-efficacy beliefs. By allowing or facilitating the continual practice of the learned skills, mental practice may also be an effective technique for teaching people ways to attain their goal.

Goal setting theory (Locke & Latham, 1990) states that if a person has the requisite ability, a specific difficult goal leads to higher performance than the setting of no goals or even an abstract goal such as do your best. This is because goal setting directs activity towards actions and information relevant to the goal, regulates effort, affects persistence, and stimulates the development of task strategies that will lead to goal attainment.

Further, Bandura (1986, 1997) stated that goals enlist evaluative self-reactions that mobilize efforts towards goal attainment by defining for an individual what constitutes acceptable performance standards. Actions that fall short of a performance standard result in a negative performance evaluation which usually leads to corrective actions; performance that attains or exceeds the goals leads to positive evaluation and self-reward.
With regard to transfer of training, Wexley and Nemeroff (1975) were among the first to test the effectiveness of goal setting as a way to bring about positive transfer of training. They found that employees who were assigned behavioral goals at the end of a 2-day training on leadership and interpersonal skills exhibited greater transfer of skills to the job of the learned material than did the participants in the control group.

Wexley and Baldwin (1986) contrasted and combined goal setting with relapse prevention as post-training transfer of training strategies of time management skills. The results indicated that the trainees who set specific goals had a higher behavioral change than either the individuals in relapse prevention or in the control conditions. Nevertheless, a potential limitation of the use of goal setting alone to facilitate transfer of training is that there can be situational constraints that reduce the probability of goal attainment (Latham & Crandall, 1991; Mathieu, Tannenbaum, & Salas, 1992; Tracey, Tannenbaum, & Kavanagh, 1995). Thus a goal setting intervention that includes relapse prevention can be more effective than the use of goal setting alone.

The discipline necessary for on-going goal commitment can also be problematic to the use of goal setting alone as a transfer of training intervention. A solution can be to complement goal setting with training in self-management that teaches people to systematically reward their efforts for goal
attainment, and to self-administer sanctions for failure to do so. Empirical results have indicated that this combination of goal setting and self-management is an effective way to increase positive transfer of training (Gist, Bavetta & Stevens, 1990; Gist, Stevens & Bavetta, 1991; Murtada & Haccoun, 1996).

Another potential limitation of the use of goal setting alone to facilitate transfer of training is that this technique assumes that the person has mastered the skills necessary to exhibit on the job the knowledge that was taught in the classroom. An intervention that may overcome this problem is mental practice because its primary emphasis is on the cognitive rehearsal of the task taught in training. Hence, a post-training transfer intervention combining both goal setting and mental practice might prove to be more effective in bringing about positive transfer than a transfer intervention using goal setting or mental practice alone.

Purpose of the study

A criticism of the training literature is that it has been primarily atheoretical and non-empirical (Baldwin & Ford, 1988; Goldstein, 1980; Latham, 1988; Tannenbaum & Yukl, 1992; Wexley, 1984). Further, there is a need for transfer of training research in organizational settings since it is not known to what extent the findings of previous laboratory studies generalize to actual employees (Mathieu, Martineau, &
Tannenbaum, 1993; Saks, 1995). Lastly, the transfer of training issue has seldom received the attention it deserves. Indeed, while there is growing recognition of the various factors influencing the transfer of learned skills to the job (Mathieu, et al., 1992; Mathieu, Martineau, & Tannenbaum, 1993; Tracey, et al., 1995), only a few studies have tested the effect of interventions aimed at increasing positive transfer of training in organizational settings (Baldwin & Ford, 1988; Tannenbaum & Yukl, 1992).

The purpose of this dissertation was twofold: First, the effect of mental practice on transfer of training was examined in a field setting. No study known by the author has tested the effects of mental practice as a post-training strategy to increase positive transfer of training in an organizational setting. Second, mental practice was contrasted with both goal setting alone, and mental practice that included explicitly set goals.
CHAPTER II
LITERATURE REVIEW

In this chapter, a review of transfer of training is given with a focus on two post-training interventions aimed at increasing positive transfer of training, namely goal setting and mental practice. Goal setting and social cognitive theories are discussed as theoretical foundations of these post-training interventions. Hypotheses to test these relationships are formulated.

Transfer of Training

As noted in Chapter I, transfer of training refers to the extent to which what was learned during training is applied on the job (Wexley & Latham, 1991). More specifically, transfer can be either positive (i.e., learning during training results in improved performance on the job), negative (i.e., learning during training results in a decrease in performance on the job), or zero (i.e., learning during training does not have any effect on job performance). For positive transfer to occur, learned behavior must generalize to the job context and be maintained over a period of time on the job (Baldwin & Ford, 1988).
Traditionally, researchers have considered four basic learning principles to maximizing positive transfer of training. That is, they would design training programs that incorporate, when possible, the concepts of identical elements (Thorndike & Woodworth, 1901), general principles (McGehee & Thayer, 1961), stimulus variability (Ellis, 1965), and conditions of practice (Briggs & Naylor, 1962; Naylor & Briggs, 1963).

The identical elements approach to transfer of training hypothesizes that the transfer of newly learned skills is maximized when the stimulus and response elements in the training are identical to those in the transfer environment (Thorndike & Woodworth, 1901).

The concept of general principles refers to a training program that teaches, not just applicable skills, but also the general rules and theoretical principles underlying the training content (McGehee & Thayer, 1961).

Stimulus variability proposes that positive transfer is more likely to occur when a variety of relevant training stimuli are employed. For instance, using several examples to illustrate a concept to be learned would strengthen more learning and transfer than the use of a single example (Ellis, 1965).

The principle of conditions of practice alludes to a number of specific training design issues such as massed versus distributed training, whole versus part training, feedback, and overlearning. Massed or distributed training refers to whether
or not to divide training into segments. Empirical evidence suggests that training content learned under distributed practice is generally retained longer than material learned during massed practice Briggs & Naylor, 1962; Naylor & Briggs, 1963). The whole or part issue "concerns the relative efficiency of practice with all the material as opposed to practice on one part at a time" (Baldwin & Ford, 1988, p. 67). The concept of feedback, or knowledge of results, states that learning is increased when trainees are provided with specific, timely information about their performance (Wexley & Thornton, 1972). Finally, overlearning refers to a training environment where trainees continue to practice the learned skill far beyond the point when it has been performed successfully.

It has been estimated that only 10% of the dollars spent on training result in positive transfer (Georgenson, 1982). Consequently, both training researchers and practitioners alike have questioned the usefulness of these traditional conceptions because they do not appear to be sufficient for bringing about substantial positive transfer of learning to the job. They seem to be deficient in that they focus only on the period of skill acquisition within the training process. A more appropriate strategy to increase transfer would be to invest research effort on the period following training (Tannenbaum & Yukl, 1992), and to focus on theories, and their related methods, that produce a
relatively permanent change in behavior, such as goal setting and social cognitive theories (Latham, 1988).

**Goal setting theory**

Goal setting theory (Locke & Latham, 1990) states that specific difficult goals lead to higher performance than urging people to do their best, that given goal commitment, the higher the goal the higher the performance, and that changes in behavior occur only to the extent that people set and remain committed to a specific difficult goal.

Goal setting, as an intervention for increasing motivation and bringing about a behavioral change, is among the most scientifically valid and useful motivational theories in organizational science (Miner, 1980; Pinder, 1984). Converging lines of evidence from enumerative reviews (e.g., Latham & Yukl, 1975; Locke, Shaw, Saari, & Latham, 1981) and meta-analyses (e.g., Tubbs, 1986) from laboratory and field experiments involving heterogeneous tasks reveal goal effects to be highly reproducible and of substantial magnitude (Locke & Latham, 1990).

With respect to transfer of training, goal setting has been investigated primarily with training in behavioral self-management to set goals, and relapse prevention to ensure ongoing goal commitment. A recent meta-analysis conducted by Haccoun, Labrèche, and Saks (1997) indicated that goal setting
alone, as a post-training transfer of training intervention, had a lower average effect size ($r = .17$) than either behavioral self-management ($r = .34$) or relapse prevention ($r = .41$).

The concept of self-management, also used interchangeably with self-regulation (Slocum & Sims, 1980) and self-control (Thoresen & Mahoney, 1974), refers to training given to an individual on ways to alter his or her own behavior in order to attain the goal that was set (Kanfer, 1970, 1975, 1980; Mills, 1983). In short, this technique involves: (a) the identification of obstacles to performance; (b) the setting of specific hard goals to overcome obstacles; (c) the monitoring of one's progress towards goal attainment; and (d) the administration of rewards and punishers based on self-evaluation of progress toward goal attainment.

Relapse prevention consists of a set of self-control strategies designed to facilitate goal attainment (i.e., the use of the learned skills) by teaching individuals to understand and cope with the problem of relapse (Marx, 1982). More specifically, relapse prevention encompasses: (a) a training on the relapse process itself; (b) the identification of high risk situations on the job that are likely to prevent transfer of training; and (c) the development of behavioral and cognitive coping skills to counter the high risk situations.

Wexley and Nemeroff (1975) were among the first to test the effectiveness of goal setting as a way to bring about positive
transfer of training. Trainees were asked to record progress in achieving behavioral goals by completing, three times a week, a set of behavioral checklists. Items on the checklist corresponded to the learning points of the training program. The findings revealed that, compared to the control group, the trainees who were assigned behavioral goals at the end of a two-day workshop on leadership and interpersonal skills exhibited greater transfer of the learned material on the job.

Wexley and Baldwin (1986) investigated the effect of three strategies for facilitating transfer of training, namely assigned goal setting, participative goal setting, and relapse prevention. Participants were university students enrolled in an upper-level management course. After attending a three-hour training workshop on improving their time-management skills, the participants were randomly assigned to one of four conditions (i.e., three treatment and a control condition). The three transfer interventions were introduced two days after the workshop.

Participants in the assigned goal setting condition received a list of behavioral goals to be performed in the weeks ahead. Participants in the participative goal setting condition were asked to develop specific behavioral goals to be achieved in the coming weeks. These goals were related to the learning point they ranked the highest in importance. Finally, participants in the relapse prevention condition were made aware
of the relapse process itself and were asked to identify situations that could prevent them from applying their time-management skills, and tactics for dealing with them.

Two months later, the results indicated that the participants in the two goal setting conditions had a significantly higher behavioral change than either the relapse prevention or the control conditions. The assigned and participative goal setting conditions did not significantly differ from one another. Note that the relapse prevention condition in this study did not focus on goal setting per se. This finding supports goal setting theory, namely, that in the absence of a specific concrete goal, a change in behavior does not occur.

Goal setting alone was compared with training in self-management to attain goals in three studies conducted by Gist and her colleagues (Gist et al., 1990, 1991; Stevens, Bavetta, & Gist, 1993). These researchers examined the effectiveness of these two techniques in facilitating the transfer of training of negotiation skills.

The findings of the first study (Gist et al., 1990) revealed that skill generalization was more limited among those who had only set goals than in the condition where participants were taught self-management skills to attain them.

In the second experiment (Gist et al., 1991), the effect of relapse prevention versus goal setting alone was investigated
with self-efficacy as a moderator. The relapse prevention training taught trainees to pinpoint situations that would likely sabotage their attempts to maintain their new learning, and it taught trainees to develop lists of potential coping responses for these situations. The goal setting intervention consisted of assigned/self-set behavioral goals related to the training in negotiation. The results showed that training in relapse prevention was an effective strategy for individuals who upon completion of the training had low or moderate self-efficacy beliefs. In contrast, simply setting specific difficult goals to apply what was learned during training to the job proved more successful for individuals who completed training with high efficacy beliefs.

The third study (Stevens et al., 1993) focused on gender differences in the transfer of the learned negotiation skills following a two-hour supplemental training in either goal setting or self-management. Both men and women in the goal setting condition improved their salaries from the baseline negotiation to the post-training negotiation. In the self-management condition, women obtained significantly greater salary gains than did similarly trained men.

Frayne and Latham (1987) and Latham and Frayne (1989) investigated the effect of training in self-management to set and attain goals for job attendance. Employee job attendance was significantly higher in the training group than in the control
group. Furthermore, the training intervention raised employees' self-efficacy, and the higher the self-efficacy, the higher the subsequent job attendance.

Tziner, Haccoun, and Kadish (1991) investigated the effect of relapse prevention on the transfer of management skills. The participants were military officers in the Israeli Defence Forces. After attending an advanced training program on how to plan and develop instruction schedules and training packages, trainees were randomly assigned to either a relapse prevention session or to a control group. Compared to the control group, those who received the relapse prevention training were more likely to apply the learned skills as reported by their immediate supervisors. This was especially true for the trainees who had high internal locus of control and who believed that they worked in a supportive environment.

Finally, a longitudinal field experiment conducted by Saks, Haccoun, and Laxer (1996) compared the effectiveness of self-management and relapse prevention as post-training interventions to improve hospital supervisor performance appraisal skills. During the last two hours of a one-day training seminar on how to conduct performance appraisal interviews, participants were exposed to either self-management or relapse prevention. Goal setting was explicit in the self-management training and implicit in the relapse prevention intervention. Both
interventions resulted in significant positive changes in trainees' behavior and self-efficacy beliefs.

Only one study could be found that had failed to show the positive effect of goal setting as a post-training transfer of training technique. In a field study involving a one-hour note taking course, Murtada and Haccoun (1996) randomly assigned university students to one of four conditions: control, goal setting, self-monitoring, and both goal setting and self-monitoring. The findings revealed that only self-monitoring had a significant effect on positive transfer of training. Behavioral goals did not enhance note taking performance even when combined with self-monitoring.

Social cognitive theory

Social cognitive theory explains human psychosocial functioning using a reciprocal determinism model where behavior, cognition, and environmental events interact with each others and influence each other (Bandura, 1986). Like goal setting, this theory is based on the assumption that individuals have the power to manage and influence their own cognitive processes (Bandura, 1991).

Social cognitive theory emphasizes vicarious, symbolic, and self-regulating processes in learning and maintaining behavior (Bandura, 1977, 1986). Vicarious learning refers to the fact that "from observing others, one forms an idea of how new
behaviors are performed, and on later occasions this coded information serves as a guide for action" (Bandura, 1977, p. 22). Further, among the countless responses one observes, "those behaviors that seem to be effective for others are favored over behaviors that seem to have negative consequences" (p. 28).

Symbolic activity refers to one's ability for forethought, that is the capacity to visualize potential situations and their outcomes (Bandura, 1991). That cognitive representation of future events can have a strong influence on present action because "through the exercise of forethought, people motivate themselves and guide their actions in an anticipatory proactive way" (Bandura, 1991, p. 248).

Self-regulation refers to mechanisms by which symbols are converted into current motivators and regulators of behavior (Bandura, 1986). One of these self-regulating mechanisms is goal setting. As argued by Bandura (1986, 1997), people have the capacity to exercise self-influence by setting explicit challenging goals which regulate their attention, persistence and level of effort. Goal setting also enlists self-evaluation and consequently, self-reactions. In short, when goal-performance discrepancies are small or are positive, individuals are satisfied and self-regulatory activities may be disengaged. In contrast, when actions fall short of a performance standard, dissatisfaction is high and motivation to reduce the discrepancy is maintained.
A second self-regulatory mechanism is self-efficacy, namely a person's belief or estimate of the capacity to orchestrate performance on a specific task (Bandura, 1986). There is strong empirical evidence of the effect of self-efficacy on performance (see Gist, 1987; Gist & Mitchell, 1992). In short, a person with high self-efficacy has been shown to outperform a person with low self-efficacy. This is because self-efficacy beliefs "influence the choices [people] make, their aspirations, how much effort they mobilize in a given endeavour, how long they persevere in the face of difficulties and setbacks ... [and] the amount of stress they experience in coping with taxing environmental demands" (Bandura, 1991, p.257).

Self-efficacy also influences behavior indirectly though goal setting (Locke & Latham, 1990). That is, a person who is highly efficacious about a task will, in general, set higher goals, exert more effort to achieve the goals, persevere longer in the face of obstacles to attain the goals and experience less stress than a person with low self-efficacy.

With respect to training, empirical research shows that self-efficacy is a key variable for understanding training effectiveness. Numerous studies have found that training can increase trainees' judgments regarding their capability to perform the learned skills (Gist, 1989; Gist, Schwoerer, & Rosen, 1989; Frayne & Latham, 1987; Latham & Frayne, 1989). Self-efficacy may act both as a moderator (Gist et al., 1989,
1991) and a mediator in the training-performance relationship (Gist, 1989). Finally, self-efficacy levels at the conclusion of training have exhibited significant correlations with post-training job performance measures (Frayne & Latham, 1987; Latham & Frayne, 1989; Ford, Quinones, Sego & Sorra, 1992).

**Mental Practice**

Mental practice, also labelled guided imagery (Sheikh, 1983), mental imagery (Finke, 1989) and imaginary practice (Perry, 1939) is generally defined as the symbolic guided rehearsal of a task in the absence of any apparent physical movement (Richardson, 1967a). The primary emphasis of mental practice is on the cognitive rehearsal of a task sequence. Basically, the guided mental rehearsal of a task is done with the help of a script that involves the following basic steps: thoughtstopping, relaxation, and guidance related to desired learning goals and outcome consequences (Wheatley et al., 1989). The term guided refers to the training aspect of mental practice where people are taught how to perform a task successfully. Hence, a mental practice script serves as an external stimulus, a guide and model for attaining goals.

To be effective, a mental practice script should: a) be relevant to the skills one wants to improve; b) contain specific and detailed step-by-step procedures; c) be personalized so people can symbolically see themselves accomplishing the purpose
of the script; d) use all senses as opposed to focusing only on visual cues; and, e) be developed carefully to avoid the negative effects of some pejorative connotations. For instance, the word "factory" could evoke positive images to some people whereas, to others, it may conjure up "images of a dirty old edifice emitting dark pollutants" (Wheatley et al., 1989, p.38).

When defining mental practice, one also needs to distinguish this cognitive technique from the mental preparation techniques which are colloquially referred to as "psyching-up" techniques. The latter usually refer to some kind of cognitive or emotional preparation normally employed immediately before performance and that do not involve the mental rehearsal of a task. Positive thinking and relaxation are among the main mental preparation techniques recognized in the literature (Caudill, Weinberg, & Jackson, 1983; Neck & Manz, 1992).

With respect to the effects of mental practice on performance, Richardson (1967a, 1967b) was among the first, if not the first, researcher to summarize and report the results of mental practice. After reviewing 25 studies that explicitly focused on the effects of mental practice, Richardson concluded that this cognitive strategy enhanced performance on both motor (e.g., dart throwing, foul shooting, speed skating) and cognitive tasks (e.g., puzzle, block tests).

Using meta-analysis, other researchers have arrived at the same conclusion. Feltz and Landers (1983) meta-analyzed 60
studies and found a significant average effect size \((d=.48)\).
Investigating a total of 35 studies with 100 separate hypothesis
tests, Driskell et al. (1994) found a similar significant
average effect size \((d=.53, p<.01)\). Transformed into a Pearson
correlation coefficient, this average effect size equals .26.
However, more detailed analyses based on hypothesis tests using
only high cognition tasks revealed that the more a cognitive
task required mental operations (e.g. compare information,
organize, categorize, generate hypotheses), the more effective
was mental practice \((r=.44, p<.01)\).

In mental practice research, tasks are usually categorized
along a continuum of cognitive activity required by a task
ranging from low to high (Driskell et al., 1994). Negotiating a
complex contract during 30 minutes would be considered a high-
cognition task whereas photocopying questionnaires would be
considered a low-cognition task. This is because, in the former,
thinking is required to perform well whereas in the latter,
physical strength is the main determinant of performance.

Even though these two meta-analyses revealed almost an
equivalent average effect size, they differed with respect to
the criteria used for the inclusion of studies. Feltz and
Landers (1983) included all mental preparation studies
regardless of methodology or quality, the only criterion being
that "there be a group that was given only mental practice and
that this group have either pretest scores or a control group to
which to be compared" (p. 29). Driskell et al. (1994) focused strictly on mental practice excluding any research "in which the mental practice manipulation was, in fact, some composite of mental and physical practice, mental practice and modeling, mental practice and relaxation, positive imagery, or emotional arousal" (p. 482). Based on the latter, it appears that the Driskell et al. (1994) meta-analysis represents the only meta-analysis effort exploring the effect of mental practice on performance.

Investigating nursing students, Doheny (1993) examined the effect of mental practice on the learning and performance of giving an intramuscular injection. Four groups were used: a mental practice only group, a relaxation only group, a combined mental practice and relaxation group and a non-equivalent control group. The results indicated that the only significant variable was the participant's ability to visualize. Indeed, nursing students with high visualization ability scores, regardless of the group they were in, performed at a significantly higher level than nursing students with low visualization ability scores. These results are convergent with previous studies that demonstrated that participants with vivid imagery had the greatest improvement in performance (Kohl, Roenker, & Turner, 1985; Ryan & Simons, 1981).

In sport psychology, Lee (1990) tested the hypothesis that mental practice affects performance via mood state. Her study
involved a muscular endurance task (i.e., bent knee sit-ups). Performance on the task was compared among three groups: a task-relevant mental practice, a positive thinking mental preparation and an equivalent control group that was asked to perform a distraction exercise consisting of counting backward by 7s from 500. The task-relevant mental practice group improved significantly more than the two other groups when compared to baseline performance. Furthermore, mood scores did not correlate with sit-up performance, suggesting that the mechanism through which mental practice works is unaffected by mood state.

Hird, Landers, Thomas, and Horan (1991) investigated three different ratios (75:25, 50:50, and 25:75) of physical to mental practice on cognitive and motor task performance. Their factorial design included three conditions of practice (physical practice only, mental practice only, and an equivalent control group) and two types of task (cognitive/pegboard and motor/pursuit rotor). Each participant had seven practice sessions within a 10-day time period. With the exception of the control group for the cognitive task (pegboard), all treatment conditions showed significant differential improvement from pre- to post-test. For all treatment groups, the effect sizes for the cognitive task were larger than for the motor task. Finally, trend analyses indicated that as the relative proportion of physical rehearsal increased, performance was enhanced.
The latter findings from Hird et al. (1991) are important because they suggest that combinations of physical and mental practice or mental practice alone is not an effective alternative to physical practice. However, as these researchers proposed, mental practice might be useful in situations where physical practice is limited by, for instance, time constraints, or expense.

Finally, Sapp (1994) conducted a field experiment to test the effect of a mental practice intervention on test anxiety and academic performance. Participants in the study were undergraduate students involved in introductory psychology courses. After selecting students high in test anxiety, she randomly assigned these individuals to two conditions: a treatment group and an equivalent control group. The difference in post-treatment test anxiety and academic performance was significant. That is, participants in the guided imagery group showed significant reductions in anxiety as well as a significant increase in academic performance in comparison with participants in the control group. These treatment gains were maintained at a six-week follow-up.

Mediator. As noted in Chapter I, the effect of mental practice on task performance may be explained by the mediating effect of self-efficacy because mental practice may act as enactive mastery, vicarious experience, and verbal persuasion,
three sources of information that have been found critical to the development of self-efficacy (Bandura, 1986).

Enactive mastery is synonymous with repeated performance accomplishments and is based on personal task mastery experiences. This source of information has been found to increase self-efficacy beliefs more than the other three information cues presented above (Bandura, 1986). Although it is usually assumed that enactive mastery refers to the actual enactment of a task, it has been suggested that people can create and, in essence, symbolically experience the completion of a task before they actually perform it (Manz, 1986; Neck & Manz, 1992). With respect to mental practice, this suggests that the mental rehearsal of a task could parallel the actual enactment of that same event. This is because the script used during the mental rehearsal of a task guides a person through a step-by-step enactment of how to perform successfully the task. Thus, when used in the context of transfer of training, mental practice can be considered as another occasion to practice the learned skills. Practicing a new skill is a well recognized learning condition (Wexley & Latham, 1991).

Vicarious experience, or modeling, is a second source of self-efficacy beliefs (Bandura, 1986). It alludes to the learning acquired on a certain task by observing someone else performing that task (Wood & Bandura, 1989). Numerous studies have shown that people, who observe a successful model, develop
higher self-efficacy beliefs than people who observe a non-
successful model or people who do not observe a model (Earley &
Kanfer, 1985; Gist, 1989; Gist et al., 1987, 1989). The effect
of modeling on self-efficacy beliefs has also been found when
the model was oneself (Anderson, 1983; Dowrick & Hood, 1981;
Gonzales & Dowrick, 1982).

With respect to the mental rehearsal of a newly learned
task, one can argue that a person who engages in mental practice
is, in fact, exposed to successful self-modeling to the extent
that this person observes, symbolically him or herself
effectively executing a task.

Verbal persuasion refers to social activity aimed at
convincing people of their capability of performing a task
(Bandura, 1986). To be successful, this type of persuasion, in
addition to conveying positive reinforcement, must include task-
relevant information (Gist, 1987). The mental practice script
used to conduct a guided mental rehearsal of a task contains
both statements aimed at leading people into believing that they
can do the task, and task-relevant procedural information.

Verbal persuasion can also take the form of self-
instruction (Bandura, 1986), which refers to an internal
dialogue about how to perform a task. Empirical studies have
revealed that self-instruction, or self-talk, increases
performance (Manz, 1986, 1992) as well as self-efficacy beliefs
(Millman & Latham, in press). In regard to a mental practice
exercise following training, it can be argued that while mentally rehearsing a learned task, an individual can engage in self-talk by including self-determined "unplanned" statements which would complement the statements contained in the mental practice script.

Finally, emotional arousal refers to an individual's perception of his or her physiological state. Negative arousal (i.e. anxiety) has been found to affect negatively the development of self-efficacy beliefs (Bandura, 1986). This is because individuals who suffer from anxiety have an elevated self-attentional focus that detracts from task performance (Gist & Mitchell, 1992). This anxiety could potentially come, for instance, from not having enough experience or knowledge about the task to be performed. As argued earlier, mental practice gives the performer an opportunity to gain knowledge about a task because the script used during a mental practice exercise teaches a person, step by step, how to attain successful performance. Thus, it can be argued that the use of mental practice after a training program could help to reduce a trainee's emotional arousal by providing supplemental task-related information. This, in turn, would increase the trainee's self-efficacy beliefs.

**Moderators.** In regard to moderating variables, the literature on mental practice indicates that both the ability to visualize and past experience with the task that is being
mentally rehearsed have a significant moderating effect on the relationship between mental practice and performance (Driskell et al., 1994).

The ability to visualize refers to the vividness, clarity, and distinctiveness with which someone can imagine a symbolic situation (Richardson, 1988). It focuses on visual as well as other sensory elements such as auditory and tactile elements (Wheatley et al., 1989). Research has shown that the effect of mental practice on performance appears to be stronger for high imagers than for people with low imaging abilities (Doheny, 1993; Kohl et al., 1985; Ryan & Simons, 1981).

These findings are consistent with the earlier argument that mental practice may act as symbolic enactive mastery and self-modeling. One’s ability to fully experience the mental rehearsal of a task may also moderate the effect of mental practice on self-efficacy. This is because a person with low imagery skills would have more difficulty experiencing the symbolic enactment of a task, and thus would be exposed to less information leading to the development of self-efficacy beliefs than a person with high imagery skills. Consequently, the effect of mental practice on self-efficacy may be greater for high imagers than low imagers.

Studies on mental practice have also indicated that previous experience with a task moderates the effect of mental practice on performance (Driskell et al., 1994). No consensus,
however, exists in terms of the direction of the impact of past experience. Schmidt (1982) argued that mental practice is more effective for a novice (i.e., in earlier stages of learning where cognitive activity dominates); Zecker (1982) maintained that mental practice is more effective with people who have experience with the task because these people have developed an accurate cognitive representation of it.

One way to resolve this debate would be to hypothesize that what matters is, in fact, one’s knowledge of the various steps required to perform successfully a task, and the more a person understands the various steps involved in successfully performing a task the more the person is able to engage in the successful symbolic enactment of that task.

Consistent with the argument that mental practice may act as a determinant of self-efficacy, a person with high task knowledge may benefit more fully the mental rehearsal of a task and thus increase self-efficacy than a person with low task knowledge.

Kanfer and Ackerman (1989) found that when learning has yet to take place, less attention is available for other cognitive activities such as the cognitive rehearsal of a task. Consequently, a person with low task knowledge may have less opportunity to develop self-efficacy regarding a task being mentally rehearsed than a person with high task knowledge.
because attention will be devoted to learning the task instead of practicing it.

Hypotheses

The hypotheses, based on the literature discussed in this chapter, are as follows:

H1: There is a main effect for mental practice; transfer of training, as measured by a BOS like score, is significantly higher in the conditions that include mental practice than in the conditions that do not include mental practice.

H2: There is a main effect for goal setting; transfer of training, as measured by a BOS like score, is significantly higher in the conditions that include goal setting than in the conditions that do not include goal setting.

H3: There is an interaction effect; transfer of training, as measured by a BOS like score, is significantly higher in the condition where people receive training in mental practice and goal setting than in the conditions where people receive only mental practice or goal setting.

H4: Self-efficacy beliefs mediate the relationship between mental practice and transfer of training.
H5: The effect of training in mental practice on self-efficacy beliefs is moderated by an individual’s visualization ability.

H6: The effect of training in mental practice on self-efficacy beliefs is moderated by the knowledge of the task an individual has prior to training in mental practice.

The methodology that was used to test these hypotheses is explained in Chapter III.
CHAPTER III

METHOD

Research site

This study was conducted in a large Canadian pulp and paper mill in Ontario. At the time that this experiment was conducted, senior management had asked the participants to acquire communication behaviors that would in turn empower employees.

A training needs analysis conducted prior to this study revealed the participants had a thorough understanding of the desired communication behaviors, but lacked confidence in applying these skills. Hence, a one-day training program was conducted to review and get consensus on the desired communication behaviors.

Mental practice was chosen as a post-training transfer strategy because it allowed opportunities for participants to practice the desired communication behaviors in an environment where errors do not negatively affect the organization. Self-set goals were used to motivate people to use the skills they had been taught.

These two techniques were accepted by the participants and the decision makers who employed them because they required minimal costs in terms of time and money.
Participants

The participants (N= 41) were operation supervisors, process engineers and staff employees. The majority of the participants were male (93%) with an average age of 46 years.

Experimental mortality (Campbell & Stanley, 1963) was as follows: 71 individuals attended the one-day training program on interpersonal communication skills; 51 trainees volunteered for the transfer of training experiment; measures at Time 2 were available from 41 participants.

With regard to age, gender, and years of experience, the data presented in Table 1 show that there were no significant differences between the participants and those who did not complete the transfer of training experiment.

<table>
<thead>
<tr>
<th>TABLE 1. Demographic variables between the participants and non participants.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>---------</td>
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<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td><strong>Gender</strong></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Years of service</strong></td>
</tr>
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<td></td>
</tr>
</tbody>
</table>
Experimental design

The participants were randomly assigned to one of four conditions in a 2 (mental practice, no mental practice) X 2 (goal setting, do your best) factorial design.

The total number of participants in each condition is shown in Table 2 below. The power (Cohen, 1988) to detect a significant effect, considering a moderate effect size, a .05 significance level, and the number of participants in each condition, was .45.

**TABLE 2. Experimental conditions**

<table>
<thead>
<tr>
<th></th>
<th>No Goal Setting (Do your best goal)</th>
<th>Goal Setting (Self-set outcome goal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Mental Practice</td>
<td>Condition #1 (n=10)</td>
<td>Condition #2 (n=11)</td>
</tr>
<tr>
<td>Mental Practice</td>
<td>Condition #3 (n=10)</td>
<td>Condition #4 (n=10)</td>
</tr>
</tbody>
</table>

Procedure

Training. The week preceding the one-day training program on interpersonal communication skills, the participants were assessed on their knowledge of the interpersonal communication process, and their self-efficacy beliefs regarding interpersonal
communication. These measures are described subsequently in this chapter.

The training was conducted by two training experts, one internal and one external to the organization. The classroom set-up, the training content and the trainers were the same for all trainees. Specifically, the training program included: 1) lectures that presented the key learning points regarding interpersonal communication (see Appendix A); 2) learning exercises where trainees experienced interpersonal communication; 3) video presentations; and 4) role play exercises.

Following the training (i.e., Time 1), the participants were asked to report their reactions toward the training program. They were also assessed, for a second time, on their knowledge of the interpersonal communication process, and their self-efficacy regarding interpersonal communication. Further, the participants' communication behavior at work was measured as observed by their supervisor and two peers of their choice.

Transfer intervention. Two months after the completion of the one-day training program, the participants in the three post-training transfer of training conditions attended a series of four one-hour transfer sessions conducted by the author biweekly. The participants in the control group were brought together and instructed to "do their best" to apply the communication skills that they had been taught.
A measure of the imagery skills of each participant in the three treatment conditions was taken during the first transfer session. For the participants in the control group, imagery skills were measured during the same time period via the organization's internal mail.

To minimize contamination across conditions, all participants were briefly lectured on the scientific research process and the importance of minimizing the effect of extraneous variables. They were requested not to reveal the condition to which they had been assigned. They were not informed as to which condition others had been assigned.

The first of four goal setting transfer sessions consisted of a 10 minute review of the learning points covered during training; a 10 minute discussion of the behavior observation scale (BOS) that would be used by a supervisor and peers to assess the transfer of their interpersonal communication skills; a 10 minute lecture on goal setting and how it can increase transfer of training; and a 30 minute goal setting activity in which each participant set an outcome goal to attain in terms of a total score on the BOS.

The first of four mental practice transfer sessions consisted of a 10 minute review of the learning points covered during training; a 10 minute discussion of the BOS followed by encouragement from the author to do their best at applying the learned skills; a 10 minute lecture on mental practice and how
it can benefit the participants; and a 30 minute mental practice exercise delivered through an audio tape which guided the participants through a step-by-step business interpersonal communication that reflected the 10 key learning points taught earlier during the one-day training program.

To develop the mental practice audio tape, three steps were taken. First, a base script was written by the author reflecting the ten communication learning points taught during training. That base script was modified following a review by a subject matter expert who had helped develop the original training program on interpersonal communication.

Second, the script was adapted to take into account the recommendations of Wheatley et al. (1989) on how to write an effective mental practice script. In short, the script was partially rewritten to ensure that the interpersonal communication was concrete, behavioral and realistically attainable by the individual doing the mental rehearsal. A relaxation and a guidance component were also added to the script as suggested by Fanning (1994).

The latter modification phase also took into account research conducted by Lang and his associates (Lang, 1979; Lang, Melamed, & Hart, 1970; Lang, Kozak, Miller, Levin, & McLean, 1980). Results from these studies suggested that mental practice instructions which contain response propositions (i.e., statements that describe the imager’s response to a scenario)
elicit far more physiological responses than do imagery instructions which contain only stimulus propositions (i.e., statements that describe the content of a scenario to be imagined).

Finally, the script was audiotaped in a professional recording studio. Appropriate music was added to facilitate the relaxation phase.

The first of four mental practice/goal setting transfer sessions included both mental practice and goal setting transfer sessions described above.

The last three biweekly goal setting transfer sessions consisted of a 30 minute discussion on the application of the learned skills. Each participant was asked to describe in writing one situation where the learned skills had been applied successfully during the last two weeks. The participants discussed their successful experiences within the group. This was followed by a 30 minute goal commitment exercise where the participants stated publicly their outcome goal on the BOS, and what they intended to do during the next two weeks in order to attain their goal.

The last three biweekly mental practice transfer sessions consisted of a 30 minute discussion on the successful application of the learned skills (same as above); a 30 minute mental practice exercise on interpersonal communication (this
exercise was the same as in the first transfer session); and, a "do your best" goal setting exercise.

The last three biweekly mental practice/goal setting transfer sessions incorporated the mental practice and goal setting sessions described above.

At the end of the last transfer session, the participants in the three treatment conditions were asked their reaction to their respective sessions as a whole. The latter measure also contained questions for the manipulation check. Specifically, the participants were asked to report any personal goals they may have pursued in regard to interpersonal communication, as well as how much time they had engaged in mental practice. Manipulation check questions for the control group were included in the final self-efficacy measurement.

One month after the last transfer session (i.e., Time 2), all participants were measured on their self-efficacy beliefs regarding interpersonal communication as well as their interpersonal communication behavior exhibited on the job as observed by their supervisor and two peers of their choice.

Measures

Self-efficacy. Self-efficacy was measured by a 15 item scale developed for this study. Specifically, the items assessed a participant's efficacy with respect to the ten key
communication behaviors taught in the training program (see Appendix C).

Following Bandura's (1986) conception of self-efficacy, participants were asked, for each item, to state "YES" or "NO", as to whether they thought they were capable of performing the communication behavior (magnitude). For each "YES", the participants indicated the strength of their confidence using a number between 1 (not at all confident) and 10 (totally confident). The self-efficacy score consisted of the sum of these confidence ratings. This measure is consistent with the recommendations of Lee and Bobko (1994).

**Ability to visualize.** Ability to visualize was measured using a modified version of the Betts' Questionnaire upon Mental Imagery (Richardson, 1994). The 35 item questionnaire focuses on the five sensory elements that can be triggered by a mental practice script, namely the visual, auditory, cutaneous, kinesthetic, and olfactory sensory elements. The items required the participants to imagine a familiar scene, and then make ratings of the vividness of specific details using a scale ranging from (1) "perfectly clear and vivid" to (7) "no image at all".

**Reactions.** Two eight item 5-point Likert type questionnaires (see Appendices D & E) were developed to measure the participants' reactions to the interpersonal communication skills training, and the post-training transfer intervention. These measures were taken
as a means of explaining why the training and/or the transfer intervention might not have worked.

**Learning.** The participants' knowledge of the interpersonal communication process was assessed by a 15 item multiple-choice test (see Appendix F). The items, developed by subject matter experts, measured the participants' comprehension of both interpersonal communication and the ten key learning points taught in the training program on interpersonal communication. Participants scores were based on the sum of correct answers.

**Behavior.** The participants' interpersonal communication behaviors were assessed by a BOS like 10 item 5-point Likert type scale ranging from 1 (i.e., almost never exhibits the behavior) to 5 (i.e., almost always exhibits the behavior). The behaviors were based on the ten key learning points taught during the training on interpersonal communication skills (see Appendix G).

The participants were assessed on two occasions, namely during the week following the one-day communication training program (time 1), and six months later (time 2). Time 2 was one month after the completion of the last transfer of training session. The assessment was done by the participants' supervisor and two peers the participants had selected. In short, this procedure addressed the need, articulated by Baldwin and Ford (1988), to conduct transfer of training research with a
relevant criterion measure that is not short-term, single-source, or based on self-report.

To increase rater objectivity, the following steps were implemented consistent with Wherry and Bartlett (1982): First, multiple raters were used; second, the BOS measure had clear and objective behavioral referents which minimized the need to infer performance; and third, the raters were instructed on how to minimize rating errors. Moreover, the observers were informed that the results were to be used solely for research evaluation purposes rather than administrative ones. Thus the observers were made aware that neither low nor high scores would affect an individual negatively or positively. Finally, neither the peers nor the supervisors were informed of the training transfer condition to which a participant had been assigned, and the participants were requested not to reveal to the peers or the supervisors the condition to which they had been assigned.
CHAPTER IV
RESULTS

In this chapter, the results from data exploration are first presented. Then manipulation checks, reliabilities, main and interaction effects as well as findings from mediator and moderator tests are reported.

Data Exploration

In this study, the distributions of the independent and dependent variables were first examined using measures of skewness and kurtosis. There is considerable skewness when the statistic approaches 2, and leptokurtosis when the statistic is greater than 5 (Levin, 1987). The data indicated that all the distributions exhibited normal skewness and kurtosis. The descriptive statistics of the measures are shown in Table 3.

The two measurements of the dependent variable (i.e., peers and supervisor observations of the participants post-training communication skills) were tested for assumptions of normality and homogeneity of variance. The results from a Levene test showed that, for both measures, there was no significant difference among group variances.
### TABLE 3. Descriptive statistics of independent and dependent measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Range</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>41</td>
<td>46</td>
<td>44</td>
<td>8.13</td>
<td>29</td>
<td>0.378</td>
<td>-1.104</td>
</tr>
<tr>
<td>Years of service</td>
<td>41</td>
<td>17.5</td>
<td>16</td>
<td>11.29</td>
<td>38</td>
<td>0.346</td>
<td>-1.101</td>
</tr>
<tr>
<td>Ability to visualize</td>
<td>41</td>
<td>93</td>
<td>92</td>
<td>34.36</td>
<td>170</td>
<td>1.208</td>
<td>2.880</td>
</tr>
<tr>
<td>Knowledge of the task</td>
<td>41</td>
<td>9.6</td>
<td>10</td>
<td>2.22</td>
<td>9</td>
<td>-0.090</td>
<td>-0.538</td>
</tr>
<tr>
<td>Goal commitment</td>
<td>21</td>
<td>33</td>
<td>34</td>
<td>4.85</td>
<td>15</td>
<td>-0.352</td>
<td>-0.905</td>
</tr>
<tr>
<td>Self-set goal</td>
<td>21</td>
<td>42.6</td>
<td>43</td>
<td>3.04</td>
<td>10</td>
<td>-0.689</td>
<td>-0.544</td>
</tr>
<tr>
<td>Self-efficacy Time 1</td>
<td>41</td>
<td>126</td>
<td>128</td>
<td>11.40</td>
<td>55</td>
<td>-0.369</td>
<td>0.245</td>
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<tr>
<td>Self-efficacy Time 2</td>
<td>41</td>
<td>130</td>
<td>130</td>
<td>11.93</td>
<td>50</td>
<td>-0.963</td>
<td>1.131</td>
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<tr>
<td>Behavior-peers Time 1</td>
<td>41</td>
<td>39.5</td>
<td>40</td>
<td>3.31</td>
<td>13</td>
<td>-0.073</td>
<td>-0.830</td>
</tr>
<tr>
<td>Behavior-peers Time 2</td>
<td>41</td>
<td>41.5</td>
<td>42</td>
<td>3.50</td>
<td>13</td>
<td>-0.004</td>
<td>-1.108</td>
</tr>
<tr>
<td>Behavior-super. Time 1</td>
<td>41</td>
<td>37.5</td>
<td>38</td>
<td>4.47</td>
<td>25</td>
<td>-0.222</td>
<td>1.835</td>
</tr>
<tr>
<td>Behavior-super. Time 2</td>
<td>41</td>
<td>38.9</td>
<td>39</td>
<td>3.66</td>
<td>16</td>
<td>-0.072</td>
<td>-0.022</td>
</tr>
</tbody>
</table>
Manipulation Checks and Reliabilities

Age of participants. A one-way ANOVA indicated no significant difference among the four conditions in regard to the participants' age ($F_{3,37}= 1.00$, ns). The respective means and standard deviations for conditions 1-4 (see Table 1) were 47.60 (9.23), 46.91 (8.04), 47.10 (9.12), and 42.10 (5.59).

Years of service. A one-way ANOVA indicated no significant difference among the four conditions in regard to the participants' years of service in the organization ($F_{3,37}= 1.75$, ns). The respective means and standard deviations for conditions 1-4 were 23.40 (13.33), 18.64 (10.62), 14.50 (9.31), and 13.30 (10.14).

Imagery skills. A one-way ANOVA revealed that the participants' imagery skills were not significantly different among the four conditions ($F_{3,37}= 2.36$, ns). The respective means and standard deviations for the conditions 1-4 were 82.50 (25.32), 96.09 (28.36), 114.60 (47.28), and 79.90 (25.17). The coefficient alpha was .96.

Reactions towards communication training. A one-way ANOVA showed that the participants' reactions towards the communication training were not significantly different among the four training groups ($F_{3,58}= .58$, ns). The means and standard deviations for the four training groups were 4.03 (.36), 3.78 (.74), 3.95 (.61), and

---

1 62 trainees out of 71 completed the reaction measure.
3.88 (.40). The coefficient alpha was .90 for the eight item 5-point Likert type measure.

**Self-efficacy.** At the end of the one-day training program, participants in the four experimental conditions did not differ significantly in their self-efficacy ($F_{3,37} = .31, \text{ ns}$). The respective means and standard deviations for the conditions 1-4 were 125.50 (11.94), 123.82 (12.26), 127.00 (13.11), and 128.50 (9.03). The coefficient alphas were: .88 (Time 1 measurement), and .92 (Time 2 measurement).

**Learning.** The participants in the four experimental conditions had similar knowledge at the end of the one-day training program ($F_{3,37} = 2.56, \text{ ns}$). The respective means and standard deviations for the conditions 1-4 were 10.30 (2.31), 9.91 (2.02), 8.00 (1.49), and 10.10 (2.47).

The coefficients alphas for the 15 item learning measure were respectively .41 for the pre-training measurement, and .55 for the post-training measurement. These low alphas are due to the fact that the knowledge test assessed more than one dimension. The results from a factor analysis, using principal components analysis as the factor extraction method, revealed that six factors accounted for 68% of the total variance. Only factors with an eigenvalue greater than 1 were included.

**Behavior.** There was no significant difference among conditions with regard to the participants' BOS scores at the end of the one-day long training program regardless of whether
the observations were made by the supervisor ($F_{3,37} = .60, \text{ns}$), or peers ($F_{3,37} = 1.10, \text{ns}$).

The coefficients alpha for the BOS were as follows: .81 (Time 1, peers), .86 (Time 2, peers), .86 (Time 1, supervisor), and .73 (Time 2, supervisor). The correlation between the BOS scores assessed by peers and the supervisor are shown in Table 4 below.

<table>
<thead>
<tr>
<th></th>
<th>Peers Time 1</th>
<th>Peers Time 2</th>
<th>Supervisor Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peers - Time 2</td>
<td>.53**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisor - Time 1</td>
<td>.23</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>Supervisor - Time 2</td>
<td>.13</td>
<td>.10</td>
<td>.46**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (two-tailed).

Reactions towards the transfer intervention. The participants' reactions to the transfer interventions were as follow: goal setting, $M = 3.47, SD = .48$; mental practice, $M = 3.49, SD = .39$; mental practice and goal setting, $M = 4.00, SD = .32$. A one-way ANOVA showed that the participants' reactions differed among the three treatment conditions ($F_{2,28} = 5.61, p< .01$). T-tests revealed that the reactions of the participants engaged in
both mental practice and goal setting were significantly higher than those who either only set goals ($t_{19} = 2.94$, $p < .01$), or only engaged in mental practice ($t_{18} = 3.21$, $p < .01$). The coefficient alpha for this scale was .87.

**Goal Setting.** During the first transfer session, the participants in the goal setting conditions were asked to set a behavioral goal in regard to a score on the BOS that they would like to attain. A two-tailed t-test ($t_{19} = 1.36$, ns) revealed that the difficulty level of participants' self-set goal in the goal setting condition ($M = 41.73$, $SD = 2.97$) was not significantly different from the goal difficulty level in the mental practice/goal setting condition ($M = 43.50$, $SD = 2.99$).

The participants' goal commitment was also measured during the first transfer session using an eight item 5-point Likert type scale (see Appendix H) adapted from Hollenbeck, Williams, & Klein (1989). The coefficient alpha was .84. The results of a two-tailed t-test revealed that goal commitment did not differ between the two goal setting conditions ($t_{19} = 1.81$, ns). Further, both means were relatively high: 31.27 (4.71) and 34.90 (4.46), for goal setting and goal setting and mental practice, respectively.

**Mental Practice.** A key concern in this study was whether the trainees in the treatment conditions engaged actively in mental practice during the post-training sessions. Furthermore, because trainees in the control group worked closely with
trainees in the treatment conditions, it was important to verify whether the control group did engaged in visualization or goal setting.

To address this issue, all participants were asked to self-report how much they engaged in visualization during the time of the post-training sessions. Specifically, they were asked the following question: "During the last two months, did you engage in some visualization activity related to interpersonal communication? If yes, please comment on your visualization experience below." This question was included in the trainee reaction measure of the post-training sessions for the treatment conditions and in the final self-efficacy measure for the control group.

The results indicated that in neither the control nor the goal setting conditions did any participant engage in visualization. In the two mental practice conditions, all participants reported an involvement in visualization activity. The latter finding is supported by anecdotal data collected through the reaction measure to the transfer sessions (e.g., "After setting up a meeting date, I tried to visualize what I was going to say and how to say it so that all participants could be involved in the discussion"; "Visualizing the different scenarios prior to a discipline meeting helped me to anticipate problems and to keep on track"; "Visualization was helpful in preparing a meeting with the union on a discipline
case”; “I visualized a conversation I wanted to initiate to resolve a conflict”).

Lastly, the participants responded on a scale from 1 (low) to 5 (high) to the question “How would you rate your participation during the transfer exercise?”. The respective means and standard deviations were as follows: goal setting, $M=3.36$, $SD=.92$; mental practice, $M=3.40$, $SD=.70$; mental practice and goal setting, $M=3.90$, $SD=.32$. An ANOVA revealed no significant differences among conditions ($F_{2,18}=1.85$, ns).

Hypotheses

The first two hypotheses stated that the use of mental practice (H1) and goal setting (H2) as post-training transfer of training strategies increases the positive transfer of newly learned skills. ANCOVAs, with communication behavior at Time 1 as the covariate, revealed no significant main effects. That is, transfer of training was not significantly higher for participants exposed to mental practice than for those not exposed to mental practice ($F_{1,36}=.99$, $p=.37$, ns, peers; $F_{1,36}=.97$, $p=.33$, ns, supervisor), and transfer of training was not significantly higher for participants in the goal setting conditions than for those in the no goal conditions regardless of whether the observations were made by peers ($F_{1,36}=.59$, $p=.45$, ns) or the supervisor ($F_{1,36}=2.02$, $p=.16$, ns). The means and standard deviations are shown in Tables 5 and 6.
TABLE 5. Communication behavior observed by peers at Time 1 & 2

<table>
<thead>
<tr>
<th></th>
<th>No Goal setting</th>
<th>Goal setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 1</td>
<td>Time 2</td>
</tr>
<tr>
<td>No mental practice</td>
<td>M= 40.95 SD= 3.09</td>
<td>M= 41.85 SD= 3.46</td>
</tr>
<tr>
<td>Mental practice</td>
<td>M= 38.75 SD= 3.47</td>
<td>M= 41.00 SD= 3.76</td>
</tr>
</tbody>
</table>

TABLE 6. Communication behavior observed by the supervisor at Time 1 & 2

<table>
<thead>
<tr>
<th></th>
<th>No Goal setting</th>
<th>Goal setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 1</td>
<td>Time 2</td>
</tr>
<tr>
<td>No mental practice</td>
<td>M= 39.00 SD= 4.35</td>
<td>M= 38.70 SD= 4.24</td>
</tr>
<tr>
<td>Mental practice</td>
<td>M= 37.00 SD= 4.78</td>
<td>M= 37.80 SD= 3.49</td>
</tr>
</tbody>
</table>

Neither ANCOVA revealed a significant interaction effect between mental practice and goal setting. Thus the third hypothesis was rejected ($F_{1,36} = .30, p = .59$, ns, peers; $F_{1,36} = .72, p = .40$, ns, supervisor).
Because of the exploratory nature of this study and the lack of statistical power due to the small sample size, paired t-tests were conducted to see if changes occurred within conditions. The results indicated that the peers of the participants in the mental practice condition observed a significant positive change in communication behavior \((t_{9}= 3.11, p< .05; d= .62)\). Moreover, the peers of the participants in the mental practice plus goal setting condition observed a significant positive change in communication behavior \((t_{9}= 3.67, p< .01; d= .92)\). No significant behavioral changes were observed on the part of the participants in the goal setting condition \((t_{10}= 1.39, p= .19, \text{ ns}, \text{ peers}; t_{10}= 1.62, p= .14, \text{ ns}, \text{ supervisor})\), or in the control group \((t_{9}= 1.40, p= .20, \text{ ns}, \text{ peers}; t_{9}= -.33, p= .75, \text{ ns}, \text{ supervisor})\).

The hypothesis that the effect of training in mental practice on task performance is mediated by self-efficacy was not tested as there was no main effect for mental practice. However, the correlations between the self-efficacy of the participants who engaged in mental practice \((n= 20)\) and performance as observed by two peers and a supervisor were .53 \((p< .05)\) and .47 \((p< .05)\), respectively.

Moreover, an ANCOVA with self-efficacy at Time 1 as the covariate revealed a main effect for mental practice only \((F_{1,36}= 6.07, p< .05; \eta^2 = .14)\). That is, the participants' self-efficacy one month after the final transfer session in the two conditions
involving mental practice was significantly higher than the self-efficacy of participants not involved in mental practice training (see Table 7 below). A Levene test for the equality of error variances among groups indicated that the four conditions are not significantly different ($F_{3.37} = 2.31$, ns).

**TABLE 7. Self-efficacy at Time 1 & 2**

<table>
<thead>
<tr>
<th></th>
<th>No Goal Setting</th>
<th>Goal Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 1</td>
<td>Time 2</td>
</tr>
<tr>
<td>No mental practice</td>
<td>$M = 125.50$</td>
<td>$M = 125.90$</td>
</tr>
<tr>
<td></td>
<td>$SD = 11.94$</td>
<td>$SD = 13.27$</td>
</tr>
<tr>
<td>Mental practice</td>
<td>$M = 127.00$</td>
<td>$M = 132.40$</td>
</tr>
<tr>
<td></td>
<td>$SD = 13.11$</td>
<td>$SD = 8.8$</td>
</tr>
</tbody>
</table>

To test the hypothesis that the effect of training in mental practice on self-efficacy is moderated by a participant's ability to visualize, a hierarchical multiple regression analysis was conducted (Baron & Kenny, 1986). In this case, the moderator was a continuous variable and the independent variable was a dichotomy (i.e., no mental practice = 0; mental practice = 1). Table 8 presents the results of the regression analysis. In short, mental practice explained a significant amount of the variance in self-efficacy at Time 2 ($R^2 = .16$, $p < .05$); ability
to visualize explained a significant amount of incremental variance ($\Delta R^2 = .05$, $p < .05$); and the interaction term explained a significant amount of additional variance in self-efficacy at Time 2 ($\Delta R^2 = .13$, $p < .01$). The interaction term was significant ($t = 2.69$, $p < .05$). Thus, participants' imagery skills moderated the effect of mental practice on self-efficacy beliefs. That is, among the participants exposed to mental practice, those with high imagery skills had a larger increase in self-efficacy than those with low imagery skills.

Table 8. Moderated multiple regression analysis of mental practice and ability to visualize

<table>
<thead>
<tr>
<th></th>
<th>$R$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy at Time 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental practice (A)</td>
<td>.40</td>
<td>.16</td>
<td></td>
<td>7.19*</td>
</tr>
<tr>
<td>Ability to visualize (B)</td>
<td>.46</td>
<td>.21</td>
<td>.05</td>
<td>5.10*</td>
</tr>
<tr>
<td>A X B</td>
<td>.58</td>
<td>.34</td>
<td>.13</td>
<td>6.37**</td>
</tr>
</tbody>
</table>

Note. $n = 41$. The $F$ value for each adjustment variable is for the whole equation.

* $p < .05$. ** $p < .01$. 


The last hypothesis stated that the effect of mental practice training on self-efficacy is moderated by the knowledge of the task one has prior to engaging in mental practice. The results of a hierarchical regression analysis (Baron & Kenny, 1986) indicated that although the regression equation of the full model was significant ($F_{3,37} = 4.25, p < .05$), the interaction term was not significant ($t = 1.30, p = .20, ns$). Thus, the hypothesis that knowledge of the task moderates trainees' self-efficacy was rejected.
CHAPTER V
DISCUSSION

This was the first field experiment with randomization of participants to conditions to examine mental practice as a transfer of training methodology in an industrial-organizational setting. Thus, this was an exploratory study. The purpose of this study was twofold: First, the effect of mental practice as well as goal setting as post-training transfer of training interventions were examined. Second, mediators and moderators that might explain transfer of training were investigated.

The findings of this study suggest that mental practice is an effective transfer intervention to increase trainees' self-efficacy regarding newly learned skills. One month after the last transfer of training session, the participants' self-efficacy in the two conditions involving mental practice was significantly higher than the self-efficacy of the participants who had not been exposed to mental practice. Further, the effect of mental practice on self-efficacy was found to be moderated by the participants' visualization ability. Finally, for those exposed to mental practice, self-efficacy correlated significantly with performance as observed by both peers and a supervisor. Voluminous research (Bandura, 1986, 1997) shows that self-efficacy is a causal variable affecting subsequent behavior.
A major limitation of this study was the lack of statistical power due to the small sample size. Thus the results of this study regarding the transfer of learned skills to the job setting, based on paired t-tests, must be viewed as tentative.

The participants in the mental practice conditions increased their BOS scores as assessed by peers, whereas the participants not exposed to mental practice were not observed by peers to have significantly improved their communication skills. The fact that no significant change were observed by the supervisors may be explained by the fact that they seldom see the employee on the job. Komacki and Desselles (1994) reported that supervisors typically spend less than one percent of their time observing their employees. Thus, had only supervisors been used, a Type II error would have been committed.

Theoretical and Practical Significance

The theoretical significance of this study is four-fold. First, this field study provides empirical evidence that mental practice is an effective cognitive strategy to strengthen trainees’ self-efficacy in regard to complex organizational tasks for which training is usually provided. One of the most consistent findings from recent research on transfer of training has been the central role of trainees’ self-efficacy for enhancing training effectiveness (Mathieu et al., 1992, 1993;
Saks, 1995). As noted in Chapter I, mental practice may affect one's self-efficacy by acting as symbolic enactive mastery, self-modeling, and verbal persuasion, three determinants of self-efficacy beliefs (Bandura, 1986, 1997).

Second, the results showed that the participants' ability to visualize moderates the effect of mental practice on self-efficacy. This finding is consistent with the argument that the effectiveness of mental practice is likely to depend upon the individuals' ability to fully experience the situation elaborated through a mental practice exercise (Doheny, 1993; Ryan & Simons, 1981).

Third, the findings suggest that goal setting by itself is not always an effective transfer of training intervention. The assumption underlying this intervention is that the participants have mastered not only the knowledge, but also the skills necessary to demonstrate that knowledge. This assumption is often dubious because training is frequently not evaluated (Campbell, 1971; Latham, 1988).

When this assumption is incorrect, and participants remain in a learning mode, Kanfer and Ackerman (1989) showed that the setting of outcome goals can have a deleterious effect on performance at worst, and have no effect on subsequent behavior at best. This is because an outcome goal during this time period distracts attention from learning by focusing on a specific quantity or quality of something to be achieved. In contrast,
mental practice emphasizes continual practice of the task-relevant behaviors.

Finally, knowledge of the task was not found to be a moderating variable. Because of the low reliability of the knowledge measure, and the low statistical power, this null finding should be accepted with caution.

With regard to practical significance, mental practice, as a cognitive tool to enhance performance, appears to be a useful organizational training technique. Mental practice increases the amount of time people can practice a complex task in a risk-free environment. Mental practice also guides trainees on how to perform a task successfully and reinforces the learning points covered during the training program.

The utility of mental practice might be even greater considering that the alteration of prior dominant responses usually requires a great deal of skill repetition and practice (Haccoun, in press). From that perspective, mental practice appears to be a cost-effective training technique.

Lastly, because ability to visualize has been found to moderate the effect of mental practice on self-efficacy beliefs, trainees should participate in specific exercises aimed at increasing their imagery skills (Fanning, 1994) before engaging in task-related mental practice.
Limitations and Future Research

A major limitation of this exploratory study is the small sample size. Efforts to obtain additional participants proved futile. Follow-up interviews revealed that employees did not want to be assessed by their peers. The small sample size reduced the power to detect significant differences among conditions.

A second explanation for the absence of significant differences in communication behavior across the conditions may be the lack of motivation on the part of the participants. Motivation to apply the skills learned during training was not directly measured. However, this rival hypothesis was rejected because high motivation level can be inferred from the self-efficacy scores and the fact no pressure was placed on the trainees to participate in this study. Participation was on a voluntary basis.

Another rival hypothesis for the null findings regarding behavior is leniency error that resulted in a restriction of range. This hypothesis was rejected because the data exploration indicated that the BOS scores were normally distributed.

A fourth rival hypothesis is the criterion problem (Ronan & Prien, 1971), namely lack of test-retest reliability in the BOS completed by the supervisor ($r = .46$) and peers ($r = .53$). Had the number of observations (i.e., time period) been increased, reliability might also have increased. The moderate reliability
of the BOS in the present study may have precluded significant results.

A fifth rival hypothesis is that communication between the participants and the observers contaminated the findings in that the observers may not have been blind. However, previous field studies on goal setting (e.g., Latham, Mitchell, & Dossett, 1978) have shown that communication about who is in what condition has had no effect on the results. Moreover, the observers had no logic or rationale to favor one treatment condition over another. Thus this hypothesis was rejected.

A second limitation of this study is due to the lack of knowledge in the scientific literature of the relative value of the components of the mental practice training. Knowledge is needed on how to develop an effective mental practice script. Researchers should carefully plan the development of the mental practice script and report in detail the procedure followed so knowledge about the method itself can be advanced.

Moreover, little is known of what the participants experience during mental practice sessions. For instance, it appears key, in retrospect, to know if the participants' symbolic enactment and vicarious experience were positive since it has been found that while successful models impact positively self-efficacy, negative ones decrease self-efficacy beliefs (Gist, 1987).
To address this limitation, future studies should obtain from each participant a comprehensive self-report as to what was actually experienced during mental practice. Such knowledge would facilitate the development of a theoretical foundation of the effect of mental practice on transfer of training and task performance.

In regard to the latter, as noted in Chapter I, a symbolic explanation of the beneficial effect of mental practice remains plausible. This theoretical explanation states that people develop a plan of the movements involved in a task. This would explain the increase in self-efficacy, and subsequently behavior.

In conjunction with this explanation, a recall effect might explain the beneficial effect of mental practice on self-efficacy and behavior. Tversky and Kahneman (1974) found that people's decision making is affected by how easily they can recall information. They also argued that the retrievability of that information is affected by familiarity. Hence, people who frequently rehearse a task would become familiar with the various steps necessary to perform it successfully, and in turn, would have high self-efficacy that they can behave accordingly.

The recall effect also appears to be complementary to the concept of psychological scripts (Gioia & Poole, 1984; Gioia & Manz, 1985). A psychological script is a "hypothesized cognitive structure that provides a guide to appropriate behavior"
sequences in a given context" (Gioia & Manz, 1985, p. 528). Mental practice training may affect a person’s psychological scripts by altering sequences of deep-rooted behaviors with sequences of new behaviors.

There is a need to conduct research on the relative effectiveness of goal setting imbedded in mental practice, self-talk or verbal guidance, self-management, and relapse prevention alone and together as transfer strategies for teaching individuals ways to apply what was learned during training to the job.

Finally, research is needed on the relative effectiveness of mental practice alone and together with outcome goals versus learning goals. Because they focus on the mastery of a new task (Winters & Latham, 1996), learning goals might prove to be a better complement to mental practice than outcome goals.
REFERENCES


APPENDIX A

KEY LEARNING POINTS
TRAINING PROGRAM ON INTERPERSONAL COMMUNICATION

1) **Choose the setting:** Choose an appropriate setting for discussion so there will be minimal disruption.

2) **Initiate with WHAT and WHY:** Always begin an interpersonal communication by telling WHAT you want to talk about and WHY it is important.

3) **Find out the facts:** Question the other person(s) to find out the facts; use "What else", "What if", "Tell me more about ...".

4) **Listen and respond with empathy:** Acknowledge others' feelings.

5) **Focus on the situation:** When discussing a situation, focus on the related facts and what actions need to be taken to improve it, not on the other person(s) involved in the communication.

6) **Check for understanding:** Check for common understanding of the situation by summarizing.

7) **Encourage involvement:** Encourage the other person's involvement by asking for help. Pay attention to, and use body language to notify the other person that you care.

8) **Share your knowledge:** Share with the other person what you know, applicable solutions or ideas that can help resolve the situation. Use examples or drawings to clarify what you are saying.

9) **Take action:** Develop an action plan of who will do what by when; set date for check progress.

10) **Show appreciation:** Make the other person feels good by complimenting them for a job well done, thanking them for a creative idea and participation in the conversation, expressing confidence in their abilities.
APPENDIX B

MENTAL PRACTICE SCRIPT ON INTERPERSONAL COMMUNICATION

You are about to embark on a journey into the deepest recesses of your inner self. I will serve as your guide on this journey. You need merely to find a comfortable position, close your eyes and relax. Now take a deep breath through your nose, and let it out through your mouth. Continue to do it in an easy natural way, not forcing anything, ... in, ... out. Keep breathing and tune into yourself. How are you feeling? How is your body feeling? What kind of energy is in your body? Don't try to change anything. Just relax and accept it all. Just be conscious of it.

Now continue to breath deeply and easily and begin to imagine that as you exhale, you're letting go of everything that you don't need, any excess tension, nervousness, tiredness, irritation, frustration. Just let go of it for now and just let it gently flow out from your body with every breath you exhale.

Now, as you inhale, imagine that you're taking in anything that you want or need ... relaxation, serenity, positive energy, patience, love, any quality you like. Feel it flowing into you as you breath in, and feel it just filling you up. Continue to breathe and imagine exhaling everything you don't need and inhaling everything you need for the next few moments.
Now I’m going to count down slowly from 10 to 1 and I’d like you to count along with me and just feel yourself gently more deeply relaxed with each count ... 10, 9, 8, ... feel yourself relaxing deeper ... 7, 6, 5, gently going deeper and deeper ... 4, 3 2, 1.

You are now in a deeply quiet relaxed state of mind. This is a very enjoyable, pleasurable state of being. You feel calm, relaxed, ready for anything.

I am now going to ask you to form some images in your mind. These mental images will be of a successful discussion you will have with another person at the mill. As we go on, step by step through that meeting, you may not have the time to enact every part of the discussion. There is no problem with that; the most important thing is to practice, in your mind, the key communication behaviours that you have learned.

As I describe this conversation with another person at the mill, I want you to imagine it as vividly as possible. This can be done through a visual image, a physical sensation, an odour, a sound, or even a taste. These are all good forms of imaging. Just relax and try to see things in as much detail as possible using all your senses or the ones you are the most comfortable with. Also try to shut out all distractions. Stay focused on my voice and relax. Don’t worry, this visionning will become easier with practice. Just relax and follow me as much as you can.
Now let’s go on with the visualization of a successful discussion. Imagine that you are arriving at the mill. You are walking by the main gate. Notice how good and relaxed you feel, see yourself smiling.

As you walk towards the room where your meeting will be held, take the time to look around, see the mill, hear the usual sounds, smell the smells.

You are now in the meeting room. Walk to a chair and sit comfortably. You are calm and relaxed, ready for anything. Now, in preparation for your discussion, I want you to take a look around the meeting room. How is the physical set-up of that room? Does it invite collaboration? Could you rearrange this room so others would feel comfortable opening up to you? Maybe you just need to move chairs, maybe you need to put the tables or a desk in a different position. Take a few moments now to think about what you could do in this room to facilitate communication.

Now that you have thought about the setting, I want you to think about a simple issue that you would like to get feedback. I want you to define that issue with one simple sentence as if you were presenting it to someone else. You can use sentences such as “The reason I wanted to see you today is to discuss ...”, or “Thank you for meeting with me today. I would like to have your input on such and such ...” Do that now, hear yourself describing this important issue.
Now that you are comfortable with the setting and the issue you want to discuss, I want you to think about a person you would like to meet with in regard to that issue. Try to see his or her face, the usual body movements of that person. Now imagine that person is happy and smiling at you.

Let's go back to the meeting room now. You are sitting comfortably in your chair, you feel relaxed and calm. The person you are waiting for is now coming towards the room. Allow yourself to feel some of the excitement and anxiety that you might experience before a problem-solving meeting. Then breath deeply and continue to relax yourself.

The person is now entering the meeting room. Slowly stand up and welcome that person with a smile. Now shake his or her hand and feel your fingers firmly but friendly squeezing the other person's hand. You are still smiling and your whole body feels very relaxed. This meeting is going to be very good; together, you will find a solution to the issue that concerns you. Just relax and stay focused on my voice.

You both now take a seat. See yourself and this other person sitting in the meeting room. Using a simple sentence, I want you now to explain to that person what the meeting is about and why you need his or her help.

Now that the other person understands the purpose of the meeting, you need to share in detail what you know about the situation. To facilitate this step, you can use examples,
analogies, drawings, and words that are familiar to the other person. Do that now, hear yourself explaining simply and clearly the issue.

Once the other person clearly understands the issue at stake, you have to ask for any additional relevant information he or she may have regarding that issue. Practice that now, see yourself asking the other person for other related information.

As others speak, it is always very important that you use body language that invites participation. For instance, you can open your arms to a relaxed position, you can smile, you can make good friendly eye contact. Take a few moments now to practice using inviting body language. Focus strictly on yourself and feel yourself smiling, nodding, making good eye contact, sitting forward. Now try to do the same thing while the other person is giving you additional information about the situation you are discussing.

Also, when people are involved in a discussion on a specific situation, they quite often bring up other issues or begin to comment on so and so. To proceed effectively, it is very important that everybody involved in the conversation stays focused on the situation being discussed. To help others achieve this, you can use sentences such as "I would appreciate if we could stay focused on ...", "I can see that this issue is important to you. When would you be free to discuss it ...", or "As mentioned before, this meeting is about such and such. Could you help stay focused
on this issue ...". Do that now. Watch yourself helping the other person stay focused on the issue at stake.

Assuming that most of the relevant information about the issue is now, you have to make sure both of you share a common understanding of the situation. To do so, you simply need to summarize all relevant facts that you have just been discussing. Take a few moments to do that now; imagine yourself simply and clearly summarizing the facts to the other person.

This visualization is going very well. Keep focusing on my voice and just relax. You are doing great. You are now at the stage of developing possible solutions to the issue at stake. Although you certainly have great ideas about how to proceed, what you really need to do first is to involve the other person. To do so, you can use sentences such as "How do you think we should handle that situation?", "What ideas do you have about how to resolve this issue?", "What resources do you think we need?" I want you to practice that now. Ask the other person about his or her ideas on how to resolve the issue you are discussing.

While another person offers suggestions, it is important that you let go of your preconceptions and just listen without judgement. Focus on yourself now and imagine yourself in a state of mind where you listen carefully, you smile, you nod and make friendly eye contact. Now try to do the same thing while the other person is giving suggestions on how to resolve the situation.
I realize that this might not be easy for some of you. Just relax and try to see yourself patiently listening to the other person, showing real interest for his or her ideas. You can do it, you can really listen with empathy and use your body language to help others opening up to you. Stay focused on my voice. Everything is going very well., just relax and smile.

To improve communication with others, another important thing that we need to practice is how to show appreciation. In response of you asking for suggestions on how to resolve the situation, the other person has just given you a great idea. You feel excited and happy. What I want you to do now is to show your appreciation to that person. You can say things like “That’s a great idea”, “Wow, this is great”, or “This is a very good suggestion, thank you.”. Do that now, visualize yourself showing your appreciation to this other person.

You are now close to the end of the meeting. You and the other person have decided to go on with the idea he or she has suggested. You are both happy and anxious to get going. What you need to do now is to decide together WHO will do WHAT by WHEN. You also need to establish how you will check progress on actions. It could be a phone call, another meeting, or any appropriate means to assure completion. The key here is to be sure to clarify everybody’s responsibilities and to establish follow-up on what has been decided. Think about that now. Do you usually set up an action plan at the end of a problem-solving meeting? Do you
follow-up on commitments after meetings? What kind of tools could you use to keep track of your commitments and the commitments of others?

The other person is now ready to leave your office. See that person standing, close to the door. Take a few moments now to thank that person one more time for taking the time to talk with you, for giving great suggestions on how to resolve the issue, for agreeing to take responsibility for action.

You return now to your chair and sit comfortably. You feel very good, better than you have in years, about the outcomes of the discussion. You have done a great job. You described the issue clearly, sought out additional information, listened with empathy, stayed focused on the situation, encouraged participation and showed appreciation. A decision was made and each of you know exactly what you have to do by when. Sit back and enjoy the feeling. You deserve it. It was a job well done. When you are ready, come back slowly into the room and open your eyes.
APPENDIX C

SELF-EFFICACY MEASURE
**SELF-EFFICACY MEASURE**

In column A, state if "YES" or "NO" you think you can perform the behavior listed at the extreme left.

In column B, state how confident you feel for each "YES" in column A.

"1" means that you are **not at all confident** that you can perform the behavior with success.

"10" means that you are **totally confident** that you can perform successfully the behavior.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can do</td>
<td>If yes, confidence level on scale of 1 to 10 (not at all-totally)</td>
</tr>
<tr>
<td>Yes / No</td>
<td></td>
</tr>
</tbody>
</table>

When I engage in a business communication with others at the Mill, I am capable of ...

- choosing a quiet place where there will be minimal disruption (noise, visual distraction, telephone, etc.).

- initiating the conversation/meeting by telling WHAT the conversation/meeting is about and WHY it is important to others involved.

- strictly focusing on the situation we are discussing.

- asking meaningful questions that will help us to find out the maximum of relevant facts.

- listening to others with an open mind and respond to them with empathy.

- checking for common understanding by summarizing the facts and feelings.

- putting aside my personal assumptions, biases and feelings towards others.

- using my body language to show that I understand and that I care.
- asking for help and encouraging participation of others to find out the best solution to the problem discussed.

- praising publicly other’s ideas and suggestions.

- openly and freely sharing own knowledge and any other relevant information that can be beneficial to the situation discussed.

- using other ideas as much as possible when developing a solution.

- thanking people involved in the conversation/meeting for their participation and their time.

- establishing an action plan listing WHO will do WHAT by WHEN.

- setting up a review date to check progress on situation.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can do</td>
<td>If Yes, confidence level on scale of 1 to 10 (not at all-totally)</td>
</tr>
<tr>
<td>Yes / No</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

REACTION MEASURE FOR THE TRAINING PROGRAM
Post-training assessment - REACTION

1. Considering everything, how would you rate this training program?

2. How much this training program will help you in your actual job?

3. How much this training program will help you better communicate with other people?

4. How would you rate the relative value of the following training components:
   - lectures and discussions
   - learning games
   - videos
   - role play exercises

5a. How would you rate Lucie Morin on the following:
   - communicate clearly what needed to be learned
   - use clear and relevant visual aids
   - provide constructive feedback during role play
   - model good communication skills

5b. How would you rate Jim McAllister on the following:
   - communicate clearly what needed to be learned
   - use clear and relevant visual aids
   - provide constructive feedback during role play
   - model good communication skills

6. How would you rate your participation during this training program?
7. In your opinion, what is:

- the strongest part of this training?  

- the part that needs most improvement?  

8. What are your other comments?  

Name (optional):  

End of Post-training Assessment - Reaction
APPENDIX E

REACTION MEASURE

FOR THE TRANSFER OF TRAINING SESSIONS
### TRAINEE REACTION FORM - “THE DEMONS” TEAM

**COURSE:** FOLLOW-UP SESSIONS  
INTERPERSONAL COMMUNICATION TRAINING

**DATE(S):** JANUARY THROUGH MARCH 1997

**LOCATION:** CORNWALL MILL

**TRAINER:** LUCIE MORIN

<table>
<thead>
<tr>
<th>Question</th>
<th>(-)</th>
<th>(+)</th>
</tr>
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<tbody>
<tr>
<td>1. Considering everything, how would you rate the follow-up sessions you have attended over the last two months?</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. How much these sessions will help you in your actual job?</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. How much these sessions will help you better communicate with other people?</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. How would you rate the relative value of the following components:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- brief lecture on 10 key behaviors</td>
<td>1</td>
<td>2</td>
</tr>
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<tr>
<td>- discussion on learnings</td>
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<td>2</td>
</tr>
<tr>
<td>- discussion on learnings</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
6. Please comment on the following:

a) During the last two months, did you pursue any goal(s) in regard to interpersonal communication? YES NO

If yes, please write down below the goal(s) you tried to achieve.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

b) During the last two months, did you engage in some visualization activity related to interpersonal communication? YES NO

If yes, please comment on your "visualization" experience below.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

7. In your opinion, what was:

- the strongest part of these follow-up sessions?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

- the part that needs most improvement?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

- any other comments?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

THANK YOU!
TRAINEES REACTION FORM - "THE PYRAMIDS" TEAM

COURSE:  **FOLLOW-UP SESSIONS**  
           **INTERPERSONAL COMMUNICATION TRAINING**

DATE(S):  **JANUARY THROUGH MARCH 1997**

LOCATION:  **CORNWALL MILL**

TRAINER:  **LUCIE MORIN**

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<th>Description</th>
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<tr>
<td>1</td>
<td>Considering everything, how would you rate the follow-up sessions you have</td>
<td>1</td>
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<td>attended over the last two months?</td>
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<td>4</td>
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<td>2</td>
<td>How much these sessions will help you in your actual job?</td>
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<td>5</td>
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<td>3</td>
<td>How much these sessions will help you better communicate with other people?</td>
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<td>2</td>
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<td>3</td>
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<td>5</td>
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</tbody>
</table>
6. Please comment on the following:

a) During the last two months, did you set any goal(s) in regard to interpersonal communication?  
   YES  NO

   If yes, please write down below the goal(s) you set for yourself.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

b) During the last two months, did you engage in some visualization activity related to interpersonal communication?  
   YES  NO

   If yes, please comment on your "visualization" experience below.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

7. In your opinion, what was:

   - the strongest part of these follow-up sessions? ____________________________________________
     ____________________________________________
     ____________________________________________
     ____________________________________________

   - the part that needs most improvement? _________________________________________________
     ____________________________________________
     ____________________________________________
     ____________________________________________

   - any other comments? _________________________________________________________________
     ____________________________________________
     ____________________________________________
     ____________________________________________

THANK YOU!
# Trainees Reaction Form - "The Roadrunners" Team

**Course:** *Follow-up Sessions Interpersonal Communication Training*  
**Date(s):** *January Through March 1997*  
**Location:** *Cornwall Mill*  
**Trainer:** *Lucie Morin*

---

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6. Please comment on the following:

a) During the last two months, did you set any goal(s) in regard to interpersonal communication? YES  NO

  If yes, please write down below the goal(s) you set for yourself.
  ______________________________________________________
  ______________________________________________________
  ______________________________________________________
  ______________________________________________________

b) During the last two months, did you engage in some visualization activity related to interpersonal communication? YES  NO

  If yes, please comment on your “visualization” experience below.
  ______________________________________________________
  ______________________________________________________
  ______________________________________________________
  ______________________________________________________

7. In your opinion, what was:

- the strongest part of these follow-up sessions? ______________________________________________________
  ______________________________________________________
  ______________________________________________________
  ______________________________________________________

- the part that needs most improvement? ______________________________________________________
  ______________________________________________________
  ______________________________________________________
  ______________________________________________________

- any other comments? ______________________________________________________
  ______________________________________________________
  ______________________________________________________
  ______________________________________________________

THANK YOU!
APPENDIX F

KNOWLEDGE MEASURE
1. Interpersonal communication is a process where ...
   a) two or more people share their feelings about a situation
   b) two or more people exchange information about a situation
   c) two or more people investigate solution(s) for a specific situation
   d) b & c
   e) all of the above

2. When a person, who is involved in a conversation, wants to gather ideas about possible solutions, he/she should:
   a) ask for help and encourage the participation of others
   b) share his/her ideas first to indicate what he/she is looking for as a solution
   c) ask the most senior person first about his/her ideas
   d) a & b

3. Non-verbal messages are key in interpersonal communication. Which of the following can be used to communicate in a non verbal manner with others:
   a) eye contact
   b) tone of voice
   c) physical distance between people
   d) a & c
   e) all of the above

4. When a person wants to show appreciation to others involved in a conversation or meeting, he/she should:
   a) say thank you publicly during the meeting
   b) say thank you privately after the meeting so nobody feels rejected
   c) wait after the meeting and write them a “Thank You” note
   d) none of the above
5. During a conversation/meeting, when someone is “checking for understanding”, it means that he or she:
a) is confused and needs more detail about the situation
b) does not believe that another person is telling the truth
c) is ensuring that everyone involved has a common understanding of the situation
d) making sure that others involved understand his or her point of view
e) none of the above

6. Barriers to effective interpersonal communication include which of the following (you can choose more than one if you wish):
a) environmental factors such as noise and room temperature
b) verbal factors such as local expressions and inside jokes
c) interpersonal factors such as personal biases and stereotypes
d) non verbal factors such as facial expressions and distance between people

7. In a conversation, a person who shows empathy
a) listens and does not speak
b) repeats everything the other person just said
c) uses body language to show understanding
d) a & c
e) none of the above

8. A person who arranges a conversation/meeting with others to discuss a specific issue or situation, should
a) explain what will be covered during the conversation/meeting and why it is important
b) take note of who is attending the conversation/meeting
c) ask others what they think the agenda should cover
d) all of the above
e) a & b
9. If during a conversation/meeting, a person becomes angry, it is important that you:
   a) deflect that anger somewhere else
   b) ask the person to step out for few minutes to calm down
   c) stay focused on the situation being discussed
   d) a & c
   e) none of the above

10. A business conversation/meeting should, as much as possible, be conducted in
    a) a place/room with minimal noise and visual distraction
    b) an open place/room where people can see that you are working
    c) a place/room where the sitting is formal so people are encouraged to be serious
    d) all of the above

11. A good communicator ...
    a) focuses equally on listening and explaining
    b) takes care of others’ personal needs such as the need for winning
    c) evaluates others’ capacity to develop good solutions for the situation being discussed
    d) stays focused on the situation
    e) all of the above

12. A person should demonstrate empathy during a conversation/meeting
    a) only when others don’t feel good
    b) only when others feel good
    c) only when others don’t understand the solution that is proposed
    d) none of the above
13. The main reason why you should share your own knowledge when discussing a situation with others is that:
   a) it will give you more control over the situation
   b) it will show others the boundaries within which the solution should be developed
   c) it will increase your credibility
   d) a & b
   e) none of the above

14. When seeking information in a conversation/meeting, you should
   a) ask only questions that can be answered by Yes or No
   b) disguise your position on the situation as a question
   c) ask questions that you are sure you know the answer
   d) a & b
   e) none of the above

15. The best way(s) to participate in a conversation/meeting is to
   a) ask as many questions as you can think of
   b) tell the individuals the answer to their problem
   c) listen attentively for feelings
   d) all of the above
   e) none of the above
APPENDIX G

INTERPERSONAL COMMUNICATION SKILLS MEASURE
ASSESSMENT - PEERS and SUPERVISOR
INTERPERSONAL COMMUNICATION SKILLS

We would ask you, on behalf of the trainee named on the attached form, to participate in an important improvement effort. More specifically, the purpose of this assessment is as follows:

- First, it will help us in determining how effective the training program on interpersonal communication skills is by comparing pre-training behaviors with post-training behaviors.
- Second, it will give the person being assessed an opportunity to receive specific feedback about his/her strengths, as well as areas that may warrant improvement with regard to interpersonal communication with others at the mill.

INSTRUCTIONS TO COMPLETE THE ASSESSMENT FORM

1) Indicate on the form if you are either a peer or superior to the trainee.

2) Complete the assessment by giving a rating from 1 to 5 on each behavior listed. When doing so, think about situations that happened in the last 6 months, rather than those that happened a year or more ago. Use the examples given for each behavior as a referent.

3) Comment your rating with specific feedback that focuses on behaviors as opposed to being judgmental.

4) Do not sign the form. Feedback is completely anonymous and will serve only to improve future training programs as well as the trainee’s interpersonal communication behaviors. Your answers will be combined with others and will never be identifiable in any way.

5) Put the form in the return envelope and send it back to Lucie Morin, Mill Training Leader, via the internal mail.

After the all forms are returned, the data collected will be summarized on one single sheet and the comments typed (to avoid handwriting analysis). This summarization will be then returned to the trainee who will have the chance to review it, and develop an improvement plan around it.

For assistance, do not hesitate to call us: D'Arcy Grant (301), Dick Hamill (466), Larry Ware (432), and Lucie Morin (387).

Thank you for your collaboration.
Dear trainee, evaluating the quality of our training programs is necessary if we want to create value. This can be done in many ways. Usually, we ask participants for their comments (reaction) on a training program at the end of it. A more effective way is to assess & compare specific behaviors before and after training to see if a change occurred. This type of assessment also gives you, because we ask your peers and superior to participate in it, an opportunity to receive specific feedback about your strengths, as well as areas that may warrant improvement with regard to interpersonal communication with others at the mill.

This assessment should only require 20 minutes of your time.

INSTRUCTIONS TO COMPLETE YOUR ASSESSMENT FORM

1) Complete the assessment form with SELF as source of assessment. Give a rating from 1 to 5 on each behavior listed. When doing so, think about situations that happened in the last 6 months, rather than those that happened a year or more ago. Use the examples given as a referent.

2) Put the form in the return envelope and send it back to Lucie Morin, Mill Training Leader, via the internal mail.

INSTRUCTIONS TO GIVE TO THOSE YOU HAVE CHOSEN TO HELP YOU

In this package, in addition to your own assessment form, there are 6 other forms already in a return envelop. When selecting those who will provide you with feedback on your interpersonal communication skills, PLEASE MAKE SURE YOU SELECT PEOPLE WHO HAVE FREQUENT CONTACT WITH YOU. Otherwise, feedback will not be valuable.

1) Give one form to your superior and distribute the other forms to peers.

2) Tell them that they don’t need to sign the form. However, they need to indicate, where it says SOURCE OF ASSESSMENT, if they are either one of your peers or your superior.

3) Tell them to use the examples given for each behavior as a referent. Make sure that they focus on behavior that happened in the last six months or so, instead of few years ago.

For assistance, do not hesitate to call us: D’Arcy Grant (301), Dick Hamill (466), Larry Ware (432), and Lucie Morin (387).

Thank you for your collaboration.
INTERPERSONAL COMMUNICATION SKILLS

TRAINER BEING ASSESSED: ________________________________

SOURCE OF ASSESSMENT: ________________________________
(Please indicate your relation, i.e. either Peer, Subordinate or Superior)

RATING SCALE                                    RATING EXPLANATIONS

1. Almost never  Almost never behaves that way; acts in a way totally opposed to this behavior.

2. Rarely  Rarely behaves that way; gives half-hearted support to this behavior.

3. Average  Displays behavior and acts in ways to support this behavior but still makes

4. Often  Often behaves that way.

5. Almost always  Almost always behaves that way; displays clear knowledge and
provides a model & direction for others in supporting this characteristic.

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Chooses appropriate setting for discussion.</td>
<td>Circle appropriate rating</td>
</tr>
<tr>
<td>. Arranges for conversation/meeting to occur in a quiet place.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>. Does not answer the phone while engaged in a conversation.</td>
<td></td>
</tr>
<tr>
<td>. Arranges for comfortable sitting.</td>
<td></td>
</tr>
</tbody>
</table>

OBSERVATIONS: Please provide detailed, specific examples of behavior to support your rating.

| B. Initiates conversation with WHAT and WHY. | Circle appropriate rating |
| . Tells what is the purpose of the conversation/meeting. | 1 2 3 4 5 |
| . Explains why it is important to all people involved in it. | |

OBSERVATIONS: Please provide detailed, specific examples of behaviour to support your rating.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
<th>Circle appropriate rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.</td>
<td><strong>Finds out the facts.</strong></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>. Questions people to find the maximum of relevant facts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>. Facilitates others’ search of facts by using “What else”, “What if”, “Tell me more”, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>OBSERVATIONS:</strong> Please provide detailed, specific examples of behaviour to support your rating.</td>
<td></td>
</tr>
<tr>
<td>D.</td>
<td><strong>Listens and responds with empathy.</strong></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>. Is genuinely interested in others and displays trust.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>. Respects opinions of others, their feelings and interests.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>. Has body language that says “I care”.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>OBSERVATIONS:</strong> Please provide detailed, specific examples of behaviour to support your rating.</td>
<td></td>
</tr>
<tr>
<td>E.</td>
<td><strong>Shows appreciation for ideas and participation.</strong></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>. Says “thank you” freely.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>. Gives credit for ideas to the proper source.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>. Provides sincere and specific compliments.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>OBSERVATIONS:</strong> Please provide detailed, specific examples of behaviour to support your rating.</td>
<td></td>
</tr>
<tr>
<td>F.</td>
<td><strong>Shares own knowledge</strong></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>. Communicates freely known facts, applicable solutions or ideas that can help resolve the situation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>. Uses examples or drawings to clarify what he/she is saying.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>OBSERVATIONS:</strong> Please provide detailed, specific examples of behaviour to support your rating.</td>
<td></td>
</tr>
<tr>
<td>G.</td>
<td><strong>Focuses on the situation, not the people.</strong></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>. Does not discuss people’s personality or feelings.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>. Sets aside personal assumptions and biases.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>OBSERVATIONS:</strong> Please provide detailed, specific examples of behaviour to support your rating.</td>
<td></td>
</tr>
</tbody>
</table>
### H. Checks for understanding.
- Summarizes the facts often to ensure that everybody involved has a common understanding of the situation.
- Repeats important information.

**OBSERVATIONS:** Please provide detailed, specific examples of behaviour to support your rating.

### I. Encourages participation of others.
- Publicly asks for help and ideas.
- Avoids telling or demanding.
- Uses others ideas whenever possible.

**OBSERVATIONS:** Please provide detailed, specific examples of behaviour to support your rating.

### J. Takes action.
- Summarizes key decisions & actions to be taken.
- Establishes a list of WHO, WHAT, and WHEN.
- Sets up review dates to check progress of situation.

**OBSERVATIONS:** Please provide detailed, specific examples of behaviour to support your rating.

Thank you for taking the time to complete this form. Your assessment will be combined with all others and summarized in one report for the individual you assessed.

Please return it by .................. in the envelope supplied.
Goal Choice and Goal Commitment Measurement

My goal is to achieve a total score of _____ on the next interpersonal communication skills assessment which will be conducted in April 1997 at the Cornwall Mill.

My commitment towards this goal is as follows:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It’s hard to take this goal seriously.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. Quite frankly, I don’t care if I achieve this goal or not.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. It is quite likely that this goal may need to be revised, depending on how things go.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. I am strongly committed to pursuing this goal.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5. I think this goal is a good goal to shoot for.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>6. I am willing to put forth a great deal of effort beyond what I’d normally do to achieve this goal.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>7. It wouldn’t take much to make me abandon this goal.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>8. It’s unrealistic for me to expect to reach this goal.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>