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An Examination of a Post-Training Strategy to Increase the Transfer of Training

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Sims,

William A.

1992

AN EXAMINATION OF A POST-TRAINING STRATEGY

TO INCREASE THE TRANSFER OF TRAINING

**A Thesis Presented to
the Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Arts**

**By
William A. Sims**

June, 1992

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AN EXAMINATION OF A POST-TRAINING STRATEGY

TO INCREASE THE TRANSFER OF TRAINING

Date Recommended 14 July 1992

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AN EXAMINATION OF A POST-TRAINING STRATEGY
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William A. Sims

June 15, 1992

78 Pages

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Researchers acknowledge a problem with the transfer of learning from the training situation to the job situation, suggesting a need to go beyond traditional methods used to increase transfer of training. The study presented here extends the research conducted by Erffmeyer (1987) and investigates whether a post-training strategy is an effective technique to increase the maintenance of behaviors learned in training to the transfer context. The study used a post-training strategy consisting of 1) goal setting, 2) specific behavioral feedback, and 3) summative feedback to increase the percentage of freethrows made by an intercollegiate varsity women's basketball team. The results presented graphically

demonstrate an improvement in performance of the treatment group. A post hoc analysis using the sign test revealed the treatment did in fact facilitate the transfer process. The results of the study suggest that post-training strategies can increase the transfer of behaviors learned in training to the applied context.

Transfer of Training

Transfer of training has been described as "the extent to which what was learned during training is used on the job" (Wexley and Latham, 1981, p.74). Although most researchers realize the importance of achieving positive transfer (McGeehee and Thayer, 1961; Wexley, 1984), reviewers such as Wexley and Baldwin (1986), Baldwin and Ford (1988), and Thayer (1988) have found that researchers generally have neglected the study of the transfer process. The failure to study the transfer process becomes increasingly important as researchers begin to realize that transfer involves more than initial learning. In fact, the learned behavior must be generalized to the job and maintained over a period of time for transfer to have occurred (Baldwin and Ford, 1988).

Another reason for concern over the issue of transfer of training is the ever-increasing scope of organizational training in the United States (Newstrom, 1984). Estimates indicate that more than 100 billion dollars is spent annually on training and development programs (Kelly, 1982). An even more alarming point is that Georgenson (1982) estimated that only 10 percent

of the dollars spent on training result in actual behavioral change back on the job.

Past researchers such as Crannell (1956), Baumgartel and Jeanpierre (1976), and Ryman and Biersner (1975) have investigated training program characteristics, such as trainee characteristics and work environment characteristics, that maximize the transfer of learning to the job context. While these factors obviously have a significant impact on initial learning and ultimately on the transfer of that learning, Michalak (1981) proposed that all too often, trainers put all their efforts into the acquisition-of-skill portion of the training. Leifer and Newstrom (1980) proposed that some type of post-training strategy to increase positive transfer may be the answer. In fact, several researchers (Michalak, 1981; Wexley and Baldwin, 1986; Erffmeyer, 1987) have used post-training strategies to increase the transfer of trained behaviors to the job.

This paper initially explicates a model of the transfer process that was proposed by Baldwin and Ford (1988). This model is discussed in order to provide a framework to aid in the understanding of the transfer

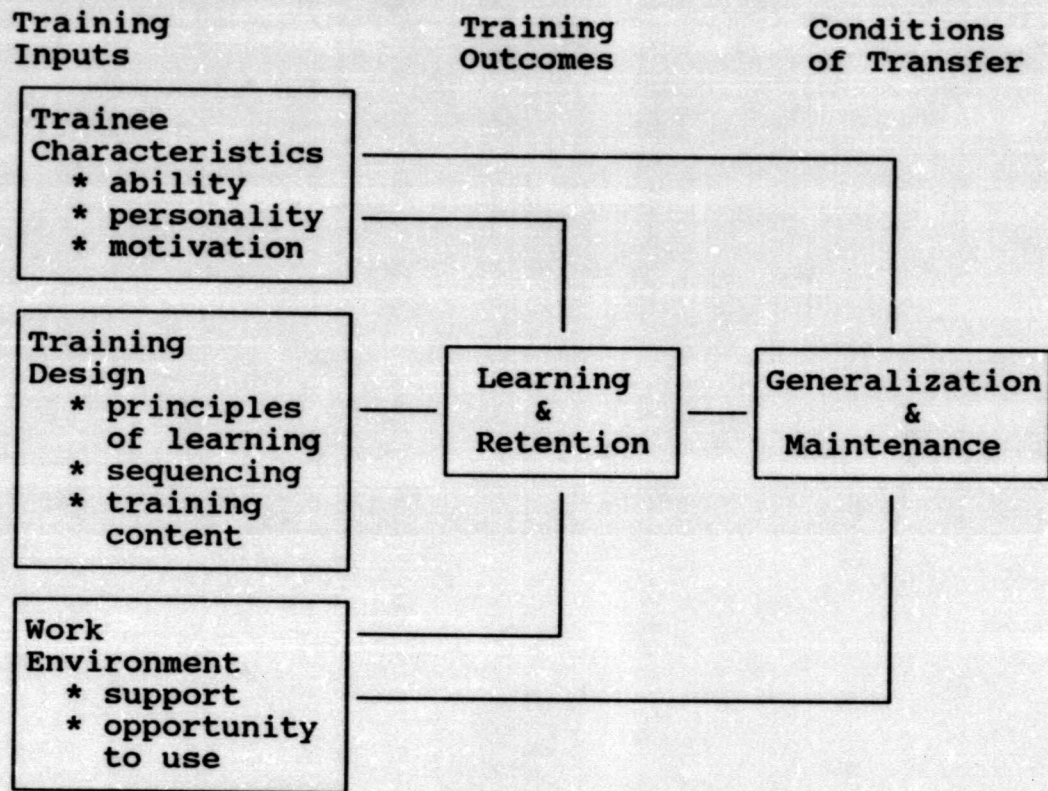
process. The discussion will then move to recent research involving post-training strategies to increase positive transfer. This author suggests that these post-training strategies should be incorporated into this model of the transfer process. Finally, a study is presented which utilized a post-training strategy to increase the transfer of behaviors learned in training to the job context. This study addresses several of the problems found in past research efforts.

Model of the Transfer Process

Until recently, researchers interested in transfer of training lacked a sense of direction because there was no theoretical framework or model to clarify the transfer process. Fortunately, Baldwin and Ford (1988), in their review of the transfer of training literature, provided just such a model (Figure 1). They have described the transfer process as a function of three factors: training inputs, training outcomes, and conditions of transfer.

The training inputs described in the model include trainee characteristics, training-design factors, and work environment factors. The trainee characteristics described in the model are such things as ability,

Figure 1. Model of the Transfer Process (Baldwin and Ford, 1988).



personality, and motivation. The training design factors described in the model include principles of learning, the sequencing of learning materials, and the training content and its relevance to the job. Finally, work environment factors included in the model are organizational support for the learned behaviors as well as the opportunities to perform those behaviors in the job situation.

The training outcomes included in the model are the learning that results from training and the retention of the learned behaviors. The conditions of transfer include both the generalization and maintenance of learned behaviors.

The Baldwin and Ford model (1988) indicates that both training input factors and training outcomes have direct and indirect effects on the conditions of transfer. Working through the model, the training outcomes of learning and retention have a direct effect on the conditions of transfer. Trainee characteristics and work environment characteristics have direct effects on the conditions of transfer regardless of the amount of learning that occurred during the initial training program. Finally, the training outcomes of learning and retention are directly affected by the three training inputs of trainee characteristics, training design, and work environment. Therefore, these three training inputs also have an indirect effect on the conditions of transfer since conditions of transfer are directly affected by the training outcomes.

The Baldwin and Ford model (1988) shown in Figure 1 provides an excellent framework for examining the

transfer process. While all of the factors identified in the model are important to the transfer process, they primarily focus on the period of skill acquisition during training. More recent research has focused on specific post-training strategies implemented in the work context to maximize the transfer of learned behaviors.

Post-Training Strategies

No one denies that the variables discussed thus far such as trainee characteristics, training design factors, and work environment factors, have an impact on transfer of training. It has become evident that something more is needed to increase transfer (Michalak, 1981). In fact, Michalak proposed that successful training should involve both the acquisition and the maintenance of behavior. While most researchers have been aware that maintenance of trained behaviors in the job context has been a problem, it was not until recently that specific post-training strategies were developed to increase positive transfer. Most of these post-training strategies fall into one of two categories: goal setting and behavioral self-management (Wexley and Baldwin, 1986).

Goal Setting

The theory of goal setting, originally proposed by Locke (1968), states that an individual's behavior is regulated by conscious goals or intentions. A goal is therefore anything the individual is trying to achieve. Locke, Shaw, Saari, and Latham (1980) reviewed the goal setting literature and concluded that goals serve the purpose of directing attention, mobilizing energy, prolonging effort, and motivating the employee to attain the goal.

Research by Locke and Latham (1984) indicates that several conditions must be present before goal setting can motivate the employee. They found that if goal setting is to work, the employee must first accept the goal which creates commitment towards the attainment of that goal. They also found that once a goal is accepted, hard goals result in higher performance levels than do easy goals, and specific hard goals produce higher performance levels than do general goals. Finally, feedback is a necessary component of goal setting for there to be an improvement in performance. In the review by Locke et al. (1981), it was concluded that neither feedback alone nor goal setting alone causes improved performance. Therefore,

to improve performance using goal setting, feedback should be provided to the employee to let that person know where he or she stands relative to his or her goal.

Several hypotheses have been put forth to explain the relationship between feedback and goal setting. Research by Cummings, Schwab, and Rosen (1971) found that feedback often leads individuals to set higher goals for themselves than when individuals are not provided with feedback. It has also been suggested by Reber and Wallin (1984) that feedback may lead to an increase in effort over goal setting alone. Finally, it has been suggested by many authors such as Komaki, Barwick, and Scott (1978) and Reber and Wallin (1984) that feedback may permit intrinsic reinforcement when that feedback indicates the person has achieved his or her goal.

Ilgen, Fischer, and Taylor (1979) reviewed the feedback literature and found that several factors should be considered when providing feedback to individuals. First, the more powerful and credible the source of the feedback, the more likely the feedback is to cause behavioral change. Second, the feedback must be understood by the recipient before he/she can act

upon it. Third, the acceptance of feedback depends on the nature of the feedback message, characteristics of the source, and characteristics of the recipient. Feedback that is positive, specific, and perceived as consistent with expectations is most likely to cause a change in the behavior of the recipient.

One question of interest within goal setting theory is whether assigned goals or participatively set goals produce more behavioral change. Research that has compared the two techniques (Latham and Saari, 1979, Wexley and Baldwin, 1986) has generally found that there are few consistent differences between assigned and participatively set goals with respect to behavioral changes, provided the goals have been accepted.

Goal setting has been demonstrated time and again to be an effective strategy for behavioral change (Locke and Latham, 1984; Wexley and Nemeroff, 1975). This behavioral change presumably results because of increased motivation. Only recently, though, have researchers advocated that goal setting be used as a post-training strategy to increase the transfer of skills learned in training (Feldman, 1981). Specifically, Feldman (1981) advocated that after

training, the supervisor and worker should enter into a contract requiring the worker to achieve a certain set of goals. In addition to the positive effects of goal setting, this technique helps the supervisor positively reinforce desirable behaviors on the job by involving him or her in the training program and making him or her more aware of positive behaviors exhibited by the trainee.

Behavioral Self-Management

The second post-training strategy advocated by researchers is behavioral self-management (Marx, 1982). This approach suggests that several factors such as environmental stimuli, trainee's feelings about those stimuli, and the consequences that result from behavior will influence the trainee's application of learned skills (Wexley and Baldwin, 1986). Wexley and Baldwin (1986) also indicated that behavioral self management helps trainees maintain desirable behavior in the work setting by 1) making trainees aware of cues in their environments, 2) causing trainees to have training-related thoughts and feelings, and 3) making clear the relationship between behavior and consequences.

Marx (1982) proposed a specific behavioral self-management technique, based on the relapse prevention

(RP) model of Marlatt and Gordon (1980), to maintain the behavioral changes acquired in management training programs. Marlatt and Gordon (1980) have used the RP model successfully to maintain abstinence from addictive behaviors following participation in a treatment program. This program's effectiveness purportedly stems from the fact that it contains both cognitive and behavioral components. These components are supposed to facilitate long-term maintenance of learned behaviors by teaching individuals to understand and cope with the problem of relapse (Wexley and Baldwin, 1986).

Marx (1982) outlined the steps that should be followed to successfully maintain the behaviors learned in a management training program. First, relapse is defined as a reversion to pretraining behavior in certain on-the-job situations. Second, trainees are made aware of the relapse process and are encouraged to describe previous slips or relapses in detail. Identifying these previous relapses provides an opportunity to identify high-risk situations where relapses are likely to occur. Third, self-efficacy is increased by reinforcing the trainee in situations where he or she successfully exhibited the proper

behavior. Fourth, positive expectancies of the effects of the new behaviors are fostered by having the trainees list the long- and short-term advantages and disadvantages of the newly learned behaviors. Finally, trainees are taught to cope with the fact that relapses happen and they should learn from each relapse experience. Thus, while the relapse prevention model does not explicitly use goal setting, the formation of these coping strategies by trainees can be seen as a form of goal setting (Wexley and Baldwin, 1986).

Until recently, most of the literature on post-training strategies (Marx, 1982) has been conceptual rather than empirical. Wexley and Baldwin (1986), however, conducted a study to investigate the extent to which using one of three post-training strategies would enhance the retention and application of trained time-management skills. The three strategies they used were (1) assigned goal setting, (2) participative goal setting, and (3) a relapse prevention technique. In addition to the three treatment conditions a control group was used. All subjects were exposed to a time management training program, and the subjects in the treatment conditions were randomly assigned to post-training strategies. The effectiveness of the transfer

strategies were evaluated in terms of Kirkpatrick's (1967) multiple levels of evaluation: reaction, learning, and behavior.

The results indicated that certain post-training strategies can be effective techniques to facilitate maintenance of learning and behavioral change. It was found that compared to the control condition, two of the experimental treatments, assigned and participative goal setting, brought about greater levels of self-reported maintenance of behavior two months after training. The results of this study then, provide support for the hypothesis that post-training strategies can enhance the positive transfer of training.

The authors reasoned that the two goal setting strategies may have created more behavioral commitment to goal accomplishment than the relapse prevention treatment. In both assigned and participative goal setting treatments the trainees were encouraged to discuss their intentions for attaining their personal objectives with other group members. These subjects also had to rate their own goal accomplishments, and return these forms to the researchers for review. Those subjects in the relapse prevention treatment were

not required to state their specific behavioral intentions. Wexley and Baldwin (1986) indicated that because the subjects in the relapse prevention treatment were not required to be explicit in terms of their behavioral intentions, this may have served to reduce their commitment to the specific behaviors. Another interesting finding from Wexley and Baldwin's (1986) study was that the assigned goal-setting treatment had a significant positive effect on both learning and behavioral maintenance, but the participative goal-setting treatment affected only behavior. It seems that subjects in the assigned goal-setting conditions were better able to recall specific information from the training program. Post-experimental interviews with the subjects indicated that subjects in the assigned goal-setting condition had to complete behavioral checklists several times a week during the program which served to focus their attention on the behaviors learned in training. The post-experimental interviews also indicated that while the subjects in the participative goal-setting treatment did not score well on the learning measure, they were using the behaviors on the job. Therefore, although subjects in the participative goal setting conditions learned the

behaviors, it was not reflected in their performance on the learning measure.

While this study by Wexley and Baldwin (1986) demonstrated that post-training strategies can be effective methods to increase positive transfer, there were several problems with their study that should be addressed in future research. First, their study lacked an adequate criterion measure of behavioral maintenance. Baldwin and Ford (1988) noted in their review that the conclusion drawn by these authors, i.e., that the post-training goal-setting intervention was more effective than the relapse prevention method, must be qualified by the fact that the conclusion is based solely on self-reported maintenance of skills and not on actual, observed behavioral changes. Thus, it seems that more research is needed using the proper criterion of actual behavioral change to investigate the effects of a post-training goal-setting strategy on transfer of training.

Another concern indicated by several researchers (e.g. Wexley and Baldwin, 1986; Baldwin and Ford, 1988) is the overuse of human relations skills training programs when investigating the transfer process. The use of these human relations programs when

investigating transfer introduces several problems. First, Hand, Richards, and Slocum (1973) found that it can take up to 18 months before behavioral changes can be observed as a result of a human relations training program. This delay occurs because it takes time for the organization to begin reinforcing the attitudes learned in training. Second, behavioral changes in interpersonal relations are difficult to operationalize, and this often forces researchers to use self-reported criterion measures (Baldwin and Ford, 1988). Third, overuse of human relations training has caused a neglect of the study of other training contexts with other types of training content (Wexley and Baldwin, 1986). Specifically, this author sees a need to investigate other types of training programs such as overt motor skills training in which the criteria are more easily operationalized. In this way, we can begin to better understand the effects of post-training strategies on behavior.

In fact, one study has been conducted which used a post-training goal setting strategy to try to increase the maintenance of learned behaviors (Erffmeyer, 1987). This study showed that goal setting was an effective technique for maintaining learned behaviors after

training has ceased. Erffmeyer (1987) trained female basketball players to increase the accuracy of their freethrow shooting. Then, a post-training goal setting strategy was used to increase the maintenance of behaviors learned in training to the practice situations. Erffmeyer showed that with no post-training goal setting strategy, performance dropped to pretraining level, while those subjects exposed to post-training goal setting maintained their highest level of performance during that phase. Learned behaviors generalized to the practice situation.

Statement of the Problem

From this review of the literature, one can see that researchers have investigated many different aspects of training in order to increase our understanding of the transfer of training. Baldwin and Ford (1988) provided an excellent model which gives researchers a framework to direct future research. This author suggests that post-training strategies should be included in that model of the transfer process. Post-training strategies seem to go beyond the research cited by Baldwin and Ford (1988) in their discussion of work environment factors which serve to foster the transfer of training. Given the evidence provided by Erffmeyer (1987) and Wexley and Baldwin (1986) that these post-training strategies can indeed increase transfer, further research in this area can only increase our knowledge of the specific factors that serve to ensure transfer.

Introduction to the Study

The study presented here builds upon the research conducted by Erffmeyer (1987). In fact, this study used the same training program that was evaluated in Erffmeyer's study. Following the training, this study

investigated whether or not a post-training goal setting strategy was an effective technique to increase the maintenance of learned behaviors in game situations. Specifically, this author hypothesized that for basketball players who had been properly trained to shoot freethrows, those exposed to a post-training strategy consisting of 1) individual goal setting, 2) specific behavioral feedback, and 3) summative feedback would be more likely to exhibit the proper freethrow shooting behaviors in game situations than those players not exposed to a post-training intervention. It was hypothesized that as a result of the behavior change caused by this post-training intervention, freethrow shooting accuracy would significantly increase.

The subjects for this study were the players on the women's basketball team at a mid-size southern university. The post-training strategy served to promote the transfer of skills learned in a preseason training program to the actual game settings.

The Preseason Training Program

Thirteen members of an intercollegiate varsity women's basketball team participated in the preseason

training program. The preseason training program was essentially a behavior modeling program focusing on attention processes, retention processes, motor reproduction, and motivation to increase the accuracy of player's freethrow shooting ability.

The training program, described in more detail in Erffmeyer (1987), consisted of four major components: key learning points, mental rehearsal, overt physical practice, and goal setting. At the beginning of the training program, all trainees were taught a 5-step process to follow when shooting freethrows. The five steps include: 1) balance, 2) three dribbles, 3) eyes on target, 4) elbows in and 5) follow through.

Mental rehearsal techniques were also used to aid in the retention of modeled performances. Players were first taught relaxation techniques. Next, they viewed a videotaped model which was using perfect form. They were then taught to visualize themselves using perfect form and making the shot as demonstrated by the videotaped model shooting freethrows in various game situations. Mental rehearsal was used because several authors in the sports psychology literature (Epstein, 1980; Weinberg, Seabourne, and Jackson, 1981) showed that mental rehearsal combined with modeling can

increase the retention of learned behaviors.

Overt physical practice was also used in the training program. In his review of the literature dealing with mental rehearsal, Oxendine (1968) found that most researchers have found that some combination of mental practice and physical practice was the best method to increase performance.

Finally, a goal setting strategy was used to motivate the players to increase the accuracy of their freethrow shooting. Goal setting was used because many authors (e.g. Locke, Shaw, Saari, and Latham, 1981; Reber and Wallin, 1984; Wexley and Baldwin, 1986) have found that specific and challenging goals can increase the performance of trainees.

This training program was conducted four days a week for six weeks during the preseason. The program ended when regular practice began.

Overview of the Post-Training Intervention

The post-training intervention, which began at midseason, consisted of 1) specific behavioral feedback, 2) summative feedback, and 3) goal setting. A challenging goal was assigned for each player in the treatment group for her freethrow shooting performance during the remainder of the season. Following each

game, the researchers met with the players to provide feedback relative to the player's goal. The specific behavioral feedback was given by a qualified rater to each player as videotapes of the player's freethrow shots during the previous game were viewed by the treatment group. Summative feedback was also given to each player regarding her overall freethrow shooting performance in 1) her last game and 2) since the intervention began. This summative feedback also let the players know where they stood relative to their freethrow shooting goal.

The control group was exposed to a relevant yet unrelated exercise to increase their field goal shooting performance. This group was exposed to a strategy consisting of 1) summative feedback, 2) mental imagery, and 3) goal setting. Summative feedback was given to each player in the control group regarding her field goal shooting performance during her last game and since the intervention began. This summative feedback also let each player know where she stood relative to her field goal shooting goal. Mental imagery was also used with each of the players mentally visualizing themselves shooting perfect field goals during their next game.

The reader should now have a general idea of what the post-training intervention involved and how it was administered. The discussion will now move to a more detailed explanation of the post-training intervention.

METHOD

Subjects

The subjects for the experiment were 12 of the 14 varsity female basketball players at a mid-size southern university. One player was not used because she was red shirted due to a preseason injury and another because she did not participate in the preseason training program.

Apparatus

Each freethrow shot in every home game was videotaped. These videotaped freethrows were shown in the feedback sessions using a VCR and television monitor. As well as videotaping each freethrow, the "accuracy" of each freethrow was recorded on a tally sheet to maintain an objective record of which freethrows were made and missed.

Design

The experiment followed a repeated measures control group design. To obtain a control group, the team was divided into two groups. Because players differed in ability, position, and playing time, it was important to obtain two relatively equal groups. Therefore, at midseason, with the help of the coach,

the players were matched into pairs according to freethrow shooting ability, playing time, and position. Then members of each pair were randomly assigned to the experimental group or the control group. Following this procedure, there was a substantial difference (i.e. 302 versus 171) between the two groups in the number of freethrows that had been shot up to the midseason mark. Therefore, two players were swapped making both groups relatively equal in the number of freethrows that had been shot as well as the accuracy of freethrow shooting. A comparison of the two groups at the midseason mark is contained in Appendix A

Procedure

The experimental intervention began after the eighth home game, one day prior to the ninth home game. During the first practice session following each subsequent home game, players in both the experimental and control groups met individually with the researchers to obtain feedback about their performance in their last game. The schedule of feedback sessions is included in Appendix B. The players in the experimental (freethrow) group received feedback regarding their freethrow shooting performance. Members of the control (field goal) group received

feedback pertaining to their field goal shooting performance.

Experimental Group

Members of the freethrow group were exposed to 1) goal setting, 2) summative feedback, and 3) specific behavioral feedback. Each feedback session was supervised by the researchers and included at least one other qualified rater (coach) to give accurate feedback.

To ensure that the feedback given to the players was reliable across different raters (coaches and researchers), intraclass correlation coefficients were computed. The intraclass correlation coefficient computed across all five raters was .80. The individual ratings of each rater were also compared to those of the coach with the most expertise. The reliability coefficients computed for each rater compared to Christy McKinney ranged from .64 to .69. Because these reliabilities are not as high as the researchers would have liked, at least one of the coaches was required to be present at each of the feedback sessions. By having at least one of the coaches present as well as the two researchers, the feedback given to the players would not be overly

influenced by any one rater. A more detailed explanation of this manipulation check can be found in Appendix C.

Assigned goals for each player's freethrow performance for the rest of the season were used to motivate the players to perform their best. During the first feedback session, difficult but attainable goals, which were negotiated between the head coach and the researchers, were discussed with and then accepted by each player. During the following feedback sessions, summative feedback (i.e. cumulative freethrow percentage) was provided to inform each player where she stood relative to her freethrow shooting goal. To ensure that players were continually aware of their progress toward their goal, this information was also recorded on a goal attainment sheet that was placed on each player's locker. An agenda for the feedback sessions with the experimental group is included in Appendix D.

Summative feedback was also given to each player regarding her overall performance during her last home game. Specifically, each player was told how many freethrows she attempted, how many she made, her percentage for the game, and her cumulative percentage

since the intervention began.

The specific behavioral feedback was given to each player by the rater while the group viewed videotaped freethrows taken during the last home game. The rater gave feedback in relation to how well the players followed the five key learning points that were learned in the preseason training program.

Control Group

The members of the field goal group received no feedback pertaining to their freethrow shooting performance. Instead, the players in the field goal group were exposed to 1) goal setting, 2) summative feedback regarding their field goal shooting performance, and 3) mental rehearsal. These feedback sessions alternately either preceded or followed the experimental group feedback sessions.

As with the experimental group, goals were assigned for each member of this group with the assistance of the coach. These goals, however, pertained to field goal shooting performance. Specifically, during the first feedback session, each player was informed of her assigned goal for the percentage of field goals which should be maintained for the rest of the season. The goal was discussed and

then accepted. During the following feedback sessions, summative feedback was used to let each player know where she stood relative to her field goal shooting goal. To ensure each player was fully aware of her goal, goal attainment sheets were placed on the lockers of each member of this group. These sheets were updated with the information from the previous game following each feedback session. An agenda for these feedback sessions is included in Appendix E. These goals were used to help motivate each player to maximize her field goal shooting performance. Summative feedback was given to each player regarding her field goal shooting performance during her last game. Specifically, each player was informed of how many field goals were attempted, how many were made, her overall game percentage, and her cumulative percentage since the intervention began.

Mental rehearsal was also used with this group. Each player was directed to mentally rehearse shooting five different field goals in her next game, using perfect form. As well as mentally rehearsing during the feedback sessions, the players were also encouraged to mentally rehearse shooting perfect field goals in their leisure time.

Dependent Measures

The effectiveness of the post-training intervention was evaluated in terms of Kirkpatrick's (1967) multiple levels of evaluation: reaction, behavior, and results.

Reaction. The reactions of the players to both the preseason training program and the post-training program were also evaluated. This was done by means of a questionnaire which was administered when the basketball season was over. It was hoped that the information obtained from this questionnaire would aid the researchers in the development of a better training program next year. A copy of the questionnaire is included in Appendix F.

Behavior. Changes in the behaviors of the players were assessed by having coaches and researchers rate the form used during the freethrow shooting performances of the players in both of the groups both before the intervention started and after. If the freethrow shooting behaviors of the members of the experimental group changed following the intervention, and the behaviors of the control group remained relatively stable or changed at different rates, then

one can conclude that the intervention had an effect.

Results. Results were evaluated for both the experimental (freethrow) group and the control (field goal) group. To evaluate the results of the experimental intervention, pre and post intervention freethrow percentages were calculated for the experimental group and the control group. If the treatment had an effect, then the experimental group should increase their percentage of freethrows after the intervention began while the freethrow percentage for the control group should remain stable or change at a different rate. Results were also evaluated in much the same way to assess the effectiveness of the field goal intervention.

An analysis of variance was also conducted to assess whether the difference between the experimental group and the control group was significant. Each player's freethrow percentage for each game was used to compute a total percentage of freethrows made both before the intervention and after. It was hoped that using the percentage for each game would give the experiment enough power to detect a significant difference between the two groups.

Results were also evaluated by visually inspecting

both the freethrow shooting results and field goal shooting results presented graphically as a time-series design for the two groups. This information aided the researchers in interpreting the results of this investigation.

RESULTS

Freethrow and field goal data were collected for both the experimental group and the control group. There were two independent manipulations conducted, both freethrow and field goal, which can be conceptualized as two separate studies. In the freethrow study, data were collected on the freethrow percentages of the freethrow (experimental) group and the field goal (control) group to assess the effectiveness of the goal setting and feedback intervention on the dependent variables. In the field goal study, data were collected on the percentages of field goals of the field goal group (experimental) and the freethrow group (control) to assess the effectiveness of the intervention involving goal setting, feedback, and mental rehearsal on the dependent variables. For clarity of presentation, the results of these two studies will be presented separately.

The Freethrow Study

Reactions. The reactions of the players in the freethrow group were evaluated using a questionnaire to determine the extent to which the players felt the intervention was helpful. Questionnaire results for the control group will be reported in another section

of this paper as they were asked questions relevant only to their intervention. Players were also asked to indicate which aspects of the intervention they felt were most helpful. There were several questions asked which do not directly pertain to the intervention, therefore, this data will not be included here. Five of the six members of the freethrow group returned their questionnaires. A copy of the questionnaire is included in Appendix F.

Overall, the respondents seemed quite pleased with the intervention. In fact, four of the five respondents indicated that the feedback beginning at midseason was very helpful, while the other respondent indicated that the feedback was helpful.

Respondents were asked to rate the relative value of each of the components of the intervention which began at midseason. On this particular question, one of the respondents ranked the components of the intervention, therefore, this question on this questionnaire was thrown out. The rating scale used was 1 (very valuable), 2 (valuable), 3 (undecided), 4 (not valuable), and 5 (harmful). The results presented in Table 1 reveal that on the average, players felt that each of the components was at least valuable. It is

interesting to note that feedback from the coach received the lowest rating (2.25). This lower rating could have resulted from the fact that the feedback received from the coach was often corrective and was always given in front of the group.

Table 1. Average ratings for each component of the feedback sessions. N=4

Goal Setting	1.7
Videotaped Freethrows	1.5
Feedback From Coach	2.25
Statistics From Last Game	1.75

Respondents were asked to indicate whether they felt setting goals for future freethrows helped them perform better. All but one respondent indicated that goal setting definitely helped them perform better. The other respondent indicated that goal setting did not help at all.

Respondents were asked to list three things they would change for the feedback sessions which began at midseason. Four of the respondents indicated that they would change nothing. The other respondent indicated that the researchers should not show the videotaped freethrows during every feedback session, that the goals should not be set for the players, and that

mental rehearsal should be used more often.

Finally, the respondents were asked to list three things they would not change for the feedback sessions which began at midseason. Videotaped feedback was the answer most often indicated as a component of the feedback sessions that they would not change. The other answers reported by the players as components they would not change were the goal setting and the coaches feedback.

Behavior. To determine if the behavior of the freethrow group changed as a result of the experimental intervention, behavioral ratings were obtained from the four raters who gave feedback to the players. Each rater viewed 119 videotaped freethrows taken of the players in the experimental and the control groups. Thus, each rater rated approximately 30 shots taken by players of each group both before and after the intervention. The freethrows included in the video were randomly selected from the freethrows videotaped at home games throughout the season. The primary objective in putting together this rating video was to have relatively equal representation of each group before and after the intervention.

The behavioral ratings obtained from the raters

were judgments as to whether or not the player was using the proper freethrow shooting technique taught during the preseason training program. If the player used perfect form, the shot was recorded as perfect by the rater. If the player did not use perfect form, the rater placed a checkmark in the column indicating the behavior that was incorrectly executed. A sample page of the rating form that was used can be found in Appendix G.

As reported earlier, an intraclass correlation coefficient was computed at midseason to determine the reliability of the judgments of the raters. The intraclass correlation coefficient computed across all raters was .80. More information regarding the results of this analysis may be found in Appendix C.

The results of the behavioral ratings are presented in Table 2. A player was judged to have used

Table 2. Number of perfect freethrows as judged by raters.

	Pre-Intervention	Post-Intervention
Freethrow Group	11	12
Field Goal Group	11	12

perfect form in executing the freethrow if two or more of the judges indicated that perfect form was used. These ratings indicate that 11 freethrow attempts were judged to have been executed perfectly by the freethrow group and the field goal group before the intervention began. After the intervention began, both groups were judged to have executed 12 freethrows using perfect form. Thus, the number of players judged to be using perfect form was identical for both groups both before and after the intervention. The results presented here indicate no significant change in the behavior of the freethrow group versus the field goal group following the advent of the intervention.

Results. Data were collected across a total of 27 games. The freethrow percentage was calculated for both the freethrow group and the field goal group before the intervention and after the intervention. Before the intervention began, the freethrow group and field goal groups were relatively equal in terms of percentage of freethrows made. In fact, the freethrow group had an average freethrow shooting percentage of 66.1% and the field goal shooting group averaged 68.8%. After the experimental intervention, the freethrow group increased their percentage to 73.2%

while the field goal group actually declined to 63.6%.
The data are presented in Table 3.

Table 3. Percentage of freethrows before and after intervention.

	Pre-Intervention	Post-Intervention
Freethrow Group	66.1% (172/260)	73.2% (93/127)
Field Goal Group	68.8% (157/228)	63.6% (63/99)

A 2 (treatment vs control group) x 2 (pre-intervention vs post-intervention) analysis of variance was conducted to determine if the difference between the experimental group and the control group before and after the intervention was significant. A summary of this analysis is presented in Table 4. The analysis was conducted using each player's freethrow percentage for each game as the unit of analysis. The analysis of variance revealed no significant difference between the two groups before and after the intervention. It is likely that there were too few players in each group to have the power to detect a significant difference between the two groups. Another contributing problem in the analysis was caused by the variability between successive freethrow shooting performances of the

Table 4. Summary of analysis of variance across for all games.

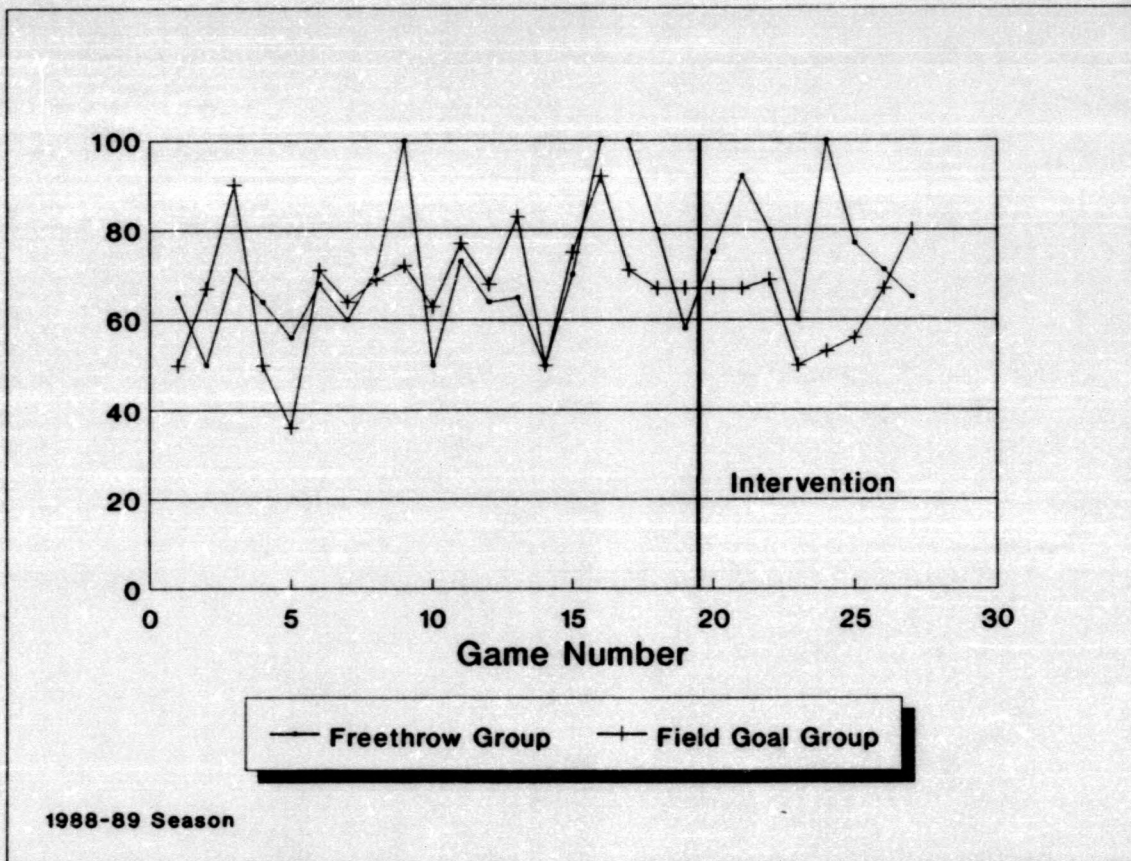
Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.068	2	.034	.369	.692
Trt vs Control	.034	1	.034	.371	.543
Pre vs Post	.038	1	.038	.407	.525
2-way Int	.090	1	.090	.968	.327
	.090	1	.090	.968	.327
Explained	.158	3	.053	.568	.637
Residual	15.932	172	.093		
Total	16.090	175	.092		

players causing much unexplained error in the analysis. This variability in freethrow shooting performances across different games was probably due to several factors. First, some players did not have the opportunity to shoot as many freethrows as other players causing their freethrow shooting performances to be sporadic. Another problem was that freethrow percentages were weighted equally whether the players had the opportunity to shoot fifteen freethrows or just one.

The increase in the percentage of freethrows made by the freethrow group versus the field goal group is

presented graphically in Figure 2. Before the intervention began, neither of the two groups was consistently higher in the percentage of freethrows made during the games. It becomes apparent when viewing the graph, however, that after the intervention began, the freethrow group was consistently higher in the percentage of freethrows made with the exception of the last game.

Figure 2. Percentage of freethrows for the freethrow group versus the field goal group.



The Field Goal Study

Reactions. The reactions of the players in the field goal group were also evaluated using a questionnaire. Like the freethrow group, members of the field goal group were asked if they felt the intervention was helpful and which components of the intervention they thought were most helpful. All six questionnaires were returned.

Overall, the respondents in the field goal group felt that the intervention beginning at midseason had some effect. Five of the six respondents indicated that the intervention was at least helpful while the other respondent indicated that it was very helpful.

Respondents were asked to rate the relative value of each of the components of the intervention which began at midseason. The rating scale used was 1 (very valuable), 2 (valuable), 3 (undecided), 4 (not valuable), and 5 (harmful). The results presented in Table 5 indicate that the players felt that the goal setting and the statistics from the last game were valuable to very valuable. The mental rehearsal component received an average rating of 2.5, with all of the ratings ranging from 1 to 3. One of the respondents who indicated that she was undecided about

Table 5. Average ratings for each component of the feedback sessions with the field goal group. N=6

Mental Rehearsal	2.5
Goal Setting	1.5
Statistics From Last Game	1.8

the effect of the mental rehearsal indicated that their was not enough of this component in each feedback session.

Respondents were asked to indicate whether they felt setting goals for future field goal shooting performances helped them perform better. Four of the six respondents indicated that setting goals might help them perform better, while the other two felt that goal setting definitely helped.

Respondents were asked to list 3 things they would change for the feedback sessions which began at midseason. Four of the respondents indicated they would change nothing. Of the remaining two respondents, one indicated that she did not like the mental rehearsal. The other indicated that more mental rehearsal was needed and the players needed more time to relax before this exercise.

Finally, the respondents were asked to list 3

things they would not change for the feedback sessions which began at midseason. Two of the players did not respond to this question. The other respondents answered this question most frequently with goal setting as a component they would not change. Other answers indicated as components they would not change were the rewards (lollipops) which were given to those players who attained their goals for the previous game, and the summative feedback following each game.

Behavior. There were no behavioral ratings obtained for field goal shooting performances because changes in the field goal shooting behavior of either group was not an independent variable of interest. In fact, field goal shooting as an activity was chosen by the researchers to serve as a control manipulation for the control group in the freethrow study.

Results. To determine if the treatment given to the field goal group had an effect, field goal shooting percentages were calculated for the field goal group and the freethrow group before and after the intervention. If the treatment had an effect, then one would expect the field goal group to increase their field goal percentage after the treatment began while the freethrow group would remain relatively stable.

Before the intervention began, the field goal group had an average field goal shooting percentage of 43.5% while the freethrow group was shooting 35.8%. After the field goal group began receiving the goal setting, summative feedback, and mental rehearsal, they increased their percentage to 50.6% while the freethrow group remained stable with a 35.4% field goal shooting average. These data are presented in Table 6. While the two groups were not equivalent in shooting percentages before the intervention began, the players were randomly assigned to groups after being paired

Table 6. Percentage of field goals before and after the intervention.

	Pre-Intervention	Post-Intervention
Freethrow Group	35.8% (218/609)	35.4% (100/282)
Field Goal Group	43.5% (319/733)	50.6% (146/288)

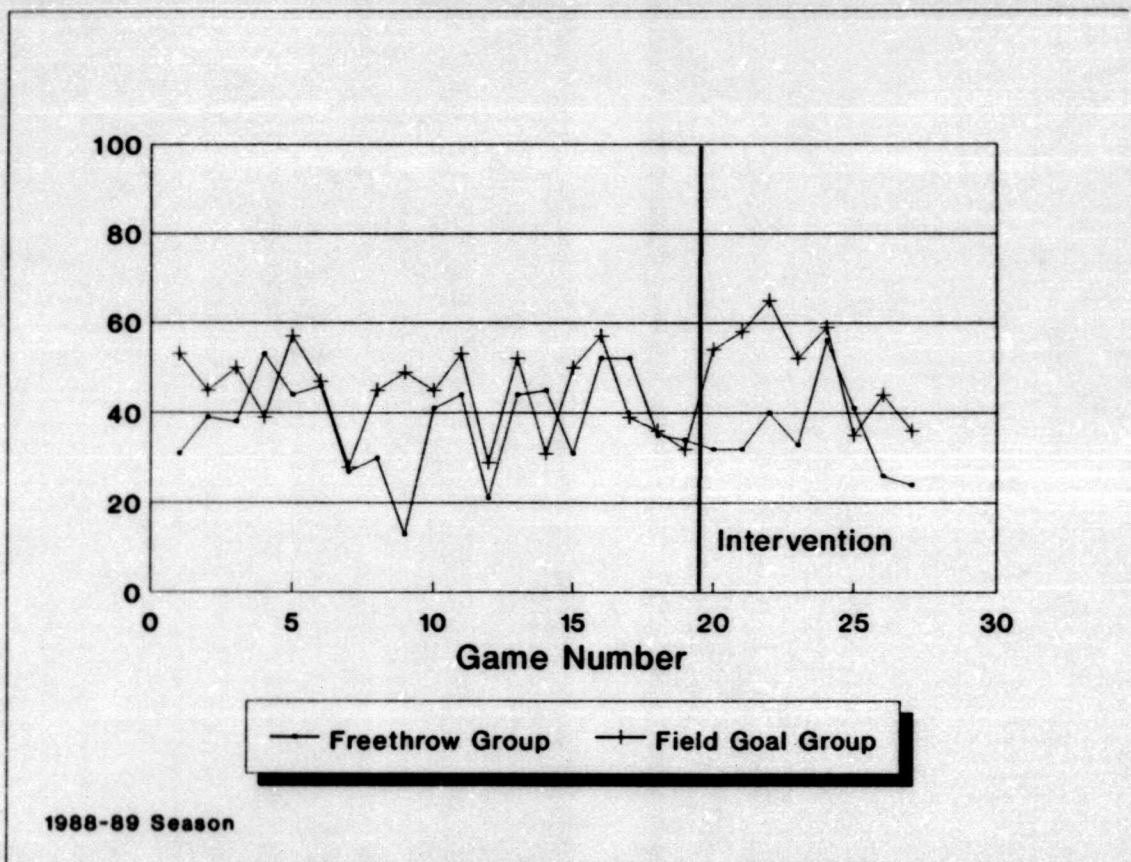
based on their freethrow shooting percentages and the amount of playing time they had experienced.

The results presented in Table 6 indicate that as hypothesized, the field goal group increased their percentage of field goals 7.1% increasing from 43.5% to 50.6%. The freethrow group's percentage remained

virtually the same dropping from 35.8% to 35.4%. In Figure 3 each group's field goal shooting percentage is presented graphically.

The two groups were relatively similar in their pre-intervention field goal shooting percentages, with the field goal group usually having a slightly higher percentage. The graph illustrates, however, the immediate impact the intervention had on the field goal

Figure 3. Percentage of field goals for field goal group versus freethrow group



shooting performance of the field goal group. As soon as the intervention began, the field goal group raised their percentage of field goals by 22%. The field goal group maintained this improved performance for the first five games following the advent of the intervention. Both groups fell slightly during the last three games. The field goal group, however, had higher field goal shooting percentages in 7 of the last eight games.

DISCUSSION

The results of the analyses conducted thus far seem to be inconclusive as to the effect of the post-training strategy in facilitating the transfer of behaviors learned in training to the game situation. When the data are examined before and after the intervention, however, one can see a noticeable difference in the performances of the experimental groups. Therefore, a post hoc analysis using a non-parametric statistic was used to verify this effect.

The data from the freethrow study viewed graphically suggest that the experimental intervention did seem to have an effect on the treatment group. Therefore, the sign test was performed. The sign test analyzes the assumption that if there is no difference between the treatment and control groups that chance alone would determine whether the treatment group or the control group scored higher during any post intervention game (Weinberg and Goldberg, 1990). Therefore, the probabilities of all possible outcomes of the experiment can be represented by a binomial model with $p=.50$ and N equal to the number of matched pairs.

The results of the sign test revealed

statistically that the treatment given to the freethrow group did have an effect on performance. Following the intervention, the freethrow group outperformed the field goal group in 7 of the 8 games. Assuming there were no differences between the two groups, the probability of this distribution of scores is $p=.03$ (Hays, 1973). Therefore, the hypothesis that the two groups were equally distributed following the intervention is rejected.

The sign test also demonstrated that the two groups were not statistically different before the intervention began. The analysis revealed that the freethrow group outperformed the field goal group in only 8 of the 18 pre-intervention games. The probability of this outcome is $p=.41$ indicating that the two groups were relatively equal in performance before the intervention began. One pre-intervention set of scores was dropped from the analysis because the two groups had equal scores.

The sign test was also performed on the results of the field goal study. The results of this analysis revealed that before the intervention began, the treatment group outperformed the control group in 15 of the 19 games. Assuming the two groups were equally

distributed before the intervention, the probability of this outcome is $p=.01$. This result indicates the two groups were not equally distributed before the intervention began.

After the intervention began, the treatment group outperformed the control group in 7 of the 8 games having a probability of occurrence of $p=.03$ assuming the two groups were equally distributed. However, since the two groups appeared to be different before the intervention, no conclusion can be drawn from this analysis about the effects of the field goal intervention.

The results of this study do indicate that post-training strategies can have an effect on the transfer of training to the game context. While the statistical analyses reported in the results section were inconclusive, the post hoc analysis discussed here does suggest that the treatment given to the freethrow group had an effect on the group's percentage of freethrows. The post hoc analysis on the field goal study data also does not rule out the possibility that the treatment had an effect. The increase in percentage of field goals of the treatment group following the intervention indicate that there may well have been a treatment

effect.

While the manipulations used in this experiment were rigorously controlled, the analysis of variance revealed no statistically significant differences between the various treatments. This researcher feels that no significant differences were found because there were too few observations of performance used in the studies both before and after the interventions began. This was likely due to the small sample size resulting in a lack of power needed to detect true differences between the groups.

Another point of interest from the study is that in both the freethrow and field goal studies, the control groups performed at a level that was lower than would have been expected under normal conditions. The results of the freethrow study showed that while the treatment group increased their percentage of freethrows by 7.1%, the control group decreased by 5.2%. The field goal study showed that the treatment group increased their field goal shooting percentage by 7.1% and the control group stayed basically the same at a level well below the season average for the whole team. This suggests the need to give the control groups some type of maintenance training on the

behavior or skill being enhanced in the treatments given to the treatment groups.

The implications of this study are both practical and theoretical. The practical significance becomes obvious when the increases in performance for the two treatment groups are considered in the proper perspective. The freethrow group experienced a 7.1% increase in freethrow shooting percentages and the field goal group also experienced a 7.1% increase in their field goal shooting percentages as a result of the intervention. These increases in performance could easily mean the difference between winning and losing a basketball game.

The results of this study extend the research conducted by Erffmeyer (1987). Erffmeyer concluded that goal setting and relevant feedback were effective means to maintain learned behaviors after training had ceased. This study went a step further and improved subjects' performances in a transfer setting utilizing a post-training strategy including goal setting and feedback. Two separate manipulations were used in this experiment. The freethrow study utilized assigned goals, summative feedback, and specific behavioral feedback. The field goal study utilized assigned goal

setting, summative feedback, and mental rehearsal. The results of this study indicate that goal setting and feedback can be effective means to increase the transfer of skills learned in training.

While both manipulations used goal setting and summative feedback in the form of game statistics, the freethrow group was exposed to specific behavioral feedback as well. Since both manipulations seemed to be effective in producing changes in performance, however, it must be concluded that summative feedback alone with the goal setting can be an effective means to increase performance.

It should also be pointed out that while the goal setting and summative feedback caused an increase in the percentage of freethrows made (i.e. performance), the operationalization of behavior used in this study did not detect a change. The fact that no change in behavior was detected, however, may have resulted from a measurement problem and not the lack of a true change in behavior.

It has already been pointed out that the ratings used in this study to measure behavioral change were somewhat unreliable. One problem with the measure used in this study was that the raters were asked to make a

judgment as to whether the freethrow shot was made or missed and whether perfect freethrow shooting form was used. The problem with this is that a shot may go in whether or not perfect shooting form was used. Therefore, conclusions about the effectiveness of the specific behavioral feedback used in this study should be made with caution. It is interesting to note, though, that most players in the freethrow group indicated in the post season questionnaire that the videotaped freethrows and coaches feedback were helpful in improving their freethrow shooting performance.

The experimental design used does not permit analysis of the separate components of the transfer strategy. Although the beneficial effects of mental rehearsal in changing behavior and increasing performance can not be assessed in this study, they have been well documented in the sports psychology literature (Epstein, 1980; Weinberg, Seabourne, and Jackson, 1981). It was indicated in the post season questionnaire that some players felt that mental rehearsal was very helpful while others were undecided about its effectiveness. One of the players indicating that she was undecided about the effectiveness of mental rehearsal also revealed that she would have preferred

more mental rehearsal.

This study attempted to build on past research studying the transfer of training while avoiding some of the problems of past research. The study by Wexley and Baldwin (1986) also investigated post-training strategies but was flawed because it lacked an adequate criterion measure of behavioral maintenance (Baldwin and Ford, 1988). This study, however, used two different operationalized criteria of behavioral maintenance. First, subjects were rated by trained raters to determine if their behavior changed as a result of the intervention. The study also looked at the results of the intervention on freethrow and field goal shooting performances. The results of a post-training intervention on the bottom line of an organization are rarely measured in a typical study investigating the transfer of skills to a work situation.

Another concern indicated by several researchers (e.g. Wexley and Baldwin, 1986; Baldwin and Ford, 1988) is the overuse of human relations skills training programs when investigating the transfer process. This study investigated the transfer of overt motor skills from the training context to the job context. By

choosing overt motor skills training, several problems inherent in measuring the effects of human relations skills training were avoided. First, the behavioral changes following motor skills training can be viewed immediately while the changes resulting from behavioral skills training can take months or years (Hand, Richards, and Slocum, 1973). Second, behavioral changes resulting from motor skills training are more easily operationalized than changes resulting from human relations skills training.

This study not only illustrates the possibility of using post-training strategies to increase the positive transfer of behaviors learned in training to the work context, but also raises other research questions. A similar study should be conducted with more attention to designing an experiment with enough power to detect true differences between groups. This study did provide sufficient evidence, however, that post-training strategies utilizing goal setting and feedback should be included in Baldwin and Ford's (1988) model of the transfer process. While these authors discussed the maintenance of behaviors learned in training once the trainees return to the work environment, they neglected to discuss methods used to facilitate

transfer and increase maintenance. Finally, it would be interesting to conduct a study investigating the relative effects of the various components of the post-training intervention used in this study. Specifically, the differences in the effectiveness of summative versus specific behavioral feedback in causing positive transfer should be examined. Mental rehearsal as a post-training strategy should also be evaluated to determine its effectiveness in causing positive transfer. Further research investigating post-training strategies is certainly needed and should shed more light on how trainers can more effectively increase the transfer of behaviors learned in training to the work context.

APPENDIX A

Comparison of Two Groups

Freethrow Group

Field Goal Group

Name	shots made	shots att.	Name	shots made	shots att.
Brigette	32	/ 47	Tan	88	/ 126
Kelly	25	/ 37	Kim	22	/ 30
Susie	54	/ 70	Mary	17	/ 29
Wendy	6	/ 10	Jennifer	15	/ 24
Michele	30	/ 49	Nancy	3	/ 5
Trina	17	/ 33	Debbie	11	/ 13
<hr/>			<hr/>		
164 / 246 66.6%			156 / 227 68.7%		

Total # of Shots 246 vs 227

Group Accuracy 66.6% vs 68.7%

Appendix B

Proposed Schedule for Feedback Sessions

<u>Date</u>	<u>Time</u>	<u>Game</u>
Sat. Feb. 1	- 3:00	following the Ohio game
Mon. Feb. 6	- 4:10	following the UAB game
Fri. Feb.10	- 4:10	following the S. Alabama game
Tues. Feb.14	- 4:10	following the Morehead S. game
Mon. Feb.20	- 4:10	following the E. Kentucky game
Sat. Feb.27	- 1:00	following the Tennessee game
Fri. Mar. 3	- 2:30	following the Tennessee Tech game
Mon. Mar. 6	- 1:15	following the N.E. Louisiana game

APPENDIX C

Manipulation Check

A rater training program was held to insure that the researchers (Dr. Elizabeth Erffmeyer and Bill Sims) as well as the other prospective raters (Christy Cruise, Cristy McKinney, and Steve Small), used to give feedback to the players were aware of the proper freethrow shooting technique which was taught to the players. This rater training program also served to examine whether each rater was capable of discriminating whether players which were videotaped during home games were using the proper form or not.

Specifically, the raters were taught the proper method of freethrow shooting using the 5-step method which was taught to the players in the preseason training program. Next, in a group feedback session, raters practiced giving feedback to others by viewing some videotaped players who used the proper method and others who used bad form. Finally, prospective raters viewed players shooting freethrows in real game situations and indicated on a rating format whether 1) the player was using the proper freethrow technique and 2) if the player made the shot based on form and

technique. The data were analyzed by means of an intraclass correlation in order to determine if the researchers agree with the expert raters about whether the players are using the proper form. The results of the reliability check are presented below. The overall reliability across the five raters is reported, as well as the degree of agreement between Christy McKinney (coach with most expertise) and the other four raters.

Overall Reliability	.80
Christy McKinney with Steve Small	.65
Christy McKinney with Christy Cruse	.65
Christy McKinney with Betsy Erffmeyer	.69
Christy McKinney with William Sims	.64

As one can see, the degree of agreement between the raters was not extremely high. It should be pointed out, however, that since very few shots which were viewed by the prospective raters were judged to have been executed perfectly, the range of shots was restricted. In other words, had there been more shots which were judged to have been executed perfectly, the reliability coefficients would have been higher.

Because the degree of agreement between judges was not as high as the researchers would have preferred, at least one of the coaches were required to be present at

every feedback session. It was hoped that having at least one coach present as well as the two researchers would increase the reliability of the feedback given to the players.

APPENDIX D

Agenda for Feedback Sessions with the Freethrow Group

I Introduction - Purpose of meetings is to insure that players are using the proper freethrow shooting form.

II Review - Review of the learning points which were taught to players during the preseason training program.

1. balance
2. three dribbles
3. eyes on target
4. elbows in
5. legs
6. follow through

III Goal Setting - Challenging but attainable goals for the percentage of freethrows which should be made for the rest of the season will be participatively set.
- After the first meeting when goals are set, this time will be utilized to discuss goal attainment.

IV Group Feedback - Group watches videotaped freethrows from the last home game. During the viewing, a qualified rater will give each player individualized feedback about the behaviors exhibited during the game. Feedback will also be given by the other players present.

V Conclusion

APPENDIX E

Agenda for Feedback Sessions with the Field Goal Group

- I Introduction - Purpose of meeting is to try to increase the players field goal percentage.
- II Feedback - Players will be given summative feedback about their field goal shooting performance in their last game.
- IV Individual Goal Setting - Goals are participatively set regarding the percentage of field goals which should be made during the rest of the season.
- III Mental Rehearsal - Players will be encouraged to mentally rehearse shooting field goals in game situations.
- V Conclusion

APPENDIX F

Evaluation Questionnaire

(Please return this form unsigned to Cristy McKinney)

1. Considering everything, how would you rate the preseason training program (class)? (Check one)

very harmful _____
harmful _____
undecided _____
helpful _____
very helpful _____

2. Considering everything, how would you rate the program which involved giving the players feedback starting at midseason?

very harmful _____
harmful _____
undecided _____
helpful _____
very helpful _____

3. Please rate the relative value of the following components of the preseason training program (i.e. class).
(1= very valuable; 2= valuable; 3= undecided; 4= not valuable
5= harmful)

5 key learning points _____
mental rehearsal _____
videotaped feedback _____
goal setting _____

4. Please rate the relative value of the following components of the feedback sessions which started at midseason.
(1= very valuable; 2= valuable; 3= undecided; 4= not valuable
5= harmful)

mental rehearsal _____
goals _____
videotaped freethrows _____
feedback from coach _____
statistics from last game _____

5. Do you feel that setting goals for your future freethrow shooting performances helps you perform better?
not at all _____ maybe _____ definitely _____

6. Do you feel that setting goals for your future field goal shooting performances helps you perform better?
not at all _____ maybe _____ definitely _____

7. List 3 things you would change for the preseason freethrow shooting program.

1. _____
2. _____
3. _____

8. List 3 things you would not change for the preseason freethrow shooting program.

1. _____
2. _____
3. _____

9. List 3 things you would change for the feedback sessions which were begun at midseason.

1. _____
2. _____
3. _____

10. List 3 things you would not change for the feedback sessions which were begun at midseason.

1. _____
2. _____
3. _____

11. When the midseason feedback sessions started, which group were you in? (Check one)

Freethrow group _____ Field Goal group _____

APPENDIX G

Ratings of Freethrows

	shot good	perf. form	bal	3 drib	eyes	elbow in	deep breath	legs	foll. thru
1 Trin									
2 Brig									
3 Brig									
4 Tan									
5 Mich									
6 Mich									
7 Tan									
8 Tan									
9 Tan									
10 Susi									
11 Brig									
12 Brig									
13 Mary									
14 Mary									
15 Tan									
16 Mich									
17 Mich									
18 Brig									
19 Brig									

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