

# Human Resource Development Review

<http://hrd.sagepub.com>

---

## Has Relapse Prevention Received a Fair Shake? A Review and Implications for Future Transfer Research

Holly M. Hutchins and Lisa A. Burke  
*Human Resource Development Review* 2006; 5; 8  
DOI: 10.1177/1534484305284316

The online version of this article can be found at:  
<http://hrd.sagepub.com/cgi/content/abstract/5/1/8>

---

Published by:



<http://www.sagepublications.com>

On behalf of:



[Academy of Human Resource Development](http://www.ahrd.org)

**Additional services and information for *Human Resource Development Review* can be found at:**

**Email Alerts:** <http://hrd.sagepub.com/cgi/alerts>

**Subscriptions:** <http://hrd.sagepub.com/subscriptions>

**Reprints:** <http://www.sagepub.com/journalsReprints.nav>

**Permissions:** <http://www.sagepub.com/journalsPermissions.nav>

**Citations** <http://hrd.sagepub.com/cgi/content/refs/5/1/8>

## Has Relapse Prevention Received a Fair Shake? A Review and Implications for Future Transfer Research

HOLLY M. HUTCHINS

*University of Houston*

LISA A. BURKE

*Louisiana State University–Shreveport*

*As learning and performance improvement continues to dominate the training research landscape, so does the need to justify the results of relevant interventions. One area in training research that has continued to elude practitioners and researchers is enhancing the use of trained skills back on the job (i.e., training transfer). Relapse prevention (RP) is a posttraining transfer intervention that has been studied for decades but associated findings lack consistency in transfer research. In this article, the authors review studies using RP as a transfer intervention, examine the weaknesses of study design and methods, and suggest improvements for future research to seek a fair test of its ultimate effectiveness.*

**Keywords:** *training transfer; relapse prevention; research design; self-efficacy*

Training continues to be viewed as a viable means to keep a workforce's skills honed and relevant for the competitive landscape. As such, learning and performance-improvement topics continue to dominate training-relevant research (e.g., Baiyin, Watkins, & Marsick, 2004; Cannon & Witherspoon, 2005; Goodman & Wood, 2004; Holton, Hsin-Chih, & Naquin, 2003; Lankau & Scandura, 2002; Santos & Stuart, 2003; Vera & Crossan, 2004). However, one area in training research that has persisted in challenging practitioners and researchers is enhancing the use of trained skills on the job (i.e., training transfer) (Holton & Baldwin, 2003). With the billions spent on such training initiatives, seeking a reasonable return on investment is rightly expected by CLOs and CEOs (Danielson & Wiggenhorn, 2003).

Transfer research has typically examined the management of training transfer before, during, and after formal training programs. For example, researchers have studied how to improve front-end analyses to ensure the appropriate training needs are identified (Swanson, 2003); how instructors

Human Resource Development Review Vol. 5, No. 1 March 2006 8-24

DOI: 10.1177/1534484305284316

© 2006 Sage Publications

can teach for transfer using overlearning, practice, fidelity, and stimulus variability concepts (Machin & Fogarty, 2003); how to append usable, effective post-training interventions for maximal transfer (e.g., Burke & Baldwin, 1999; Gaudine & Saks, 2004; Wexley & Baldwin, 1986), and the extent to which the organizational learning culture supports the application and maintenance of trained skills (Egan, Yang, & Bartlett, 2004). With regard to post-training interventions that have been tested and reported in the literature, one particular approach has enjoyed a notable degree of theoretical grounding in its conception (Marx & Burke, 2003). Relapse prevention (RP) is a post-training transfer intervention originated by and still in use by clinical psychologists who treat various addictions (smoking, drugs, alcohol, food, etc.) (Marlatt & Gordon, 1980, 1985). Bob Marx (1982) originally adapted RP strategies to the corporate training environment, in hopes of applying its principles to help bolster trainee transfer of training. Initially conceptualized as being particularly helpful for managers participating in management-development programs involving leadership and communication skills training (Marx, 1982, 1986), the use of RP as a transfer intervention has also been used with mixed audiences in nonmanagerial training programs (e.g., train-the-trainer, nursing, customer service).

Relapse prevention (RP) has been studied in the training research for about 20 years, but its associated findings lack any comfortable measure of consistency. This discrepancy offers little assurance to training practitioners seeking alternatives to transfer interventions that enjoy stronger support in the literature such as goal setting (Locke, Shaw, Saari, & Latham, 1981; Richman-Hirsch, 2001) and hinders transfer researchers in extending the RP conceptual framework to other prospective settings and participants. The purpose of this article is to uncover reasons why inconsistent results have plagued RP studies and restricted further conceptual and practical refinements. To address this problem, we review the published works on relapse prevention in the training literature in order to assess its apparent mixed success. Our overall goal is to enable training scholars to stay at the forefront of transfer-related theorizing, research, and practice and to be able to convey the results to practitioners interested in using relapse prevention as a transfer of training strategy.

## **Relapse Prevention: Origin and Application**

For background purposes, relapse prevention (RP) is a self-management model that was originally created for clinical and counseling psychologists who treat addictive behaviors, including alcohol and drug recovery, smoking cessation, and weight loss (Marlatt & Gordon, 1980). This intervention helps addicts to anticipate, cope, and deal with any potential lapse or slip back into prior disruptive, habitual behaviors. A “slip” may or may not lead

to total relapse, such as a smoker's first cigarette post-treatment (Marlatt & Gordon, 1980), and so the individual's response to a lapse determines whether a relapse occurs. RP is well-grounded in social cognitive learning theory, which considers the reciprocal interaction among personal, environmental, and behavioral determinants (Bandura, 1982) on individuals' decisions concerning future behavior. As such, RP theory claims that people can control their own behavior if they understand what antecedents initiate it and how they can reward or punish relevant behaviors (Kreitner & Luthans, 1984). In RP training, individuals are trained to become aware of situational and intrapersonal threats (known as high-risk situations) that jeopardize the maintenance of their new behavior.

*Applications to organizational training.* In an attempt to tackle the critical transfer problem in corporate training, Marx (1982) astutely observed that, just as dealing with transfer environments is critical in programs designed to treat addictive behaviors, it is similarly important for maintaining behavioral change after less life-threatening situations, such as organizational training programs. Even though corporate trainees do not face the threats to their health or psychological well-being that patients in various clinical settings might face, they must negotiate a parallel array of troublesome influences to maintain behavior change (Marx, 1982) that may, over time, lessen the trainee's belief in their ability to use and maintain the new skills. Amended to the organizational training context as a post-training transfer intervention, Marx (1986) defined the intervention as containing seven steps in which trainees would (a) set a skill maintenance goal, (b) operationally define a slip and relapse, (c) elucidate the advantages and/or disadvantages of applying new skills, (d) discuss 14 specific transfer strategies both cognitive and behavioral, (e) forecast their first slip, (f) generate coping skills, and (g) self-monitor their progress back at work. A training aid, similar to the one listed in the appendix, has been used as a part of the RP intervention in several studies. The relapse-prevention training aid shown in the appendix explicitly links the seven steps of Marx's model with the major challenges associated with the transfer of training.

*Role of self-efficacy.* At the theoretical core of the RP approach is the focus on enhancing individual self-efficacy toward using and maintaining trained skills. Marx (1986) posited that trainees often relapse to former behaviors because they lack a certain degree of self-efficacy when they encounter obstacles (such as stress, time pressure, skill inadequacies) once they return to work. Bandura (1982, pp. 126-129) defined self-efficacy as perceived judgments individuals make about their competency to perform a defined task and identified four sources of self-efficacy development:

- *Enactive mastery:* performance success strengthens self beliefs of capability;
- *Modeling:* proficient models build self-beliefs of capability by conveying to observers effective strategies for managing different situations;

- *Social persuasion*: realistic encouragement promotes individual effort; and
- *Arousal*: positive affective state can increase self-beliefs of capability.

The RP approach assumes that trainees who learn certain cognitive-behavioral coping skills (see Table 1) will experience a heightened degree of self-efficacy toward transfer of training amidst the obstacles and high-risk situations pervasive in the work environment. The concept of enactive mastery, one of the strongest sources of efficacy development noted by Bandura (1982), is central to explaining this effect. The process of enactive mastery occurs when individuals experience increased self-efficacy based on continuous, successful performance of new skills or behaviors. Relative to the training context, trainees who can successfully use RP strategies to preempt and overcome setbacks to skill use and maintenance will be more likely to experience increased self-efficacy toward skill maintenance, thus increasing prolonged skill transfer—an outcome that organizations desperately would like to see increase past the meager 15% to 20% mark often reported in the literature (Anthony & Norton, 1991; Newstrom, 1986). In short, the RP approach is based on the idea that mere learning and mastery of skills is a necessary but not a sufficient condition for *transfer* of skills to occur, and that trainees are more likely to engage in positive transfer of training when they learn strategies to maintain (or increase) their self-efficacy toward positive transfer amidst the challenges of the organizational setting.

The relationship between trainee self-efficacy and increased performance is well developed in the training literature. Participant self-efficacy has been found to be strongly related to trainee learning, motivation to transfer, application, and maintenance of trained skills on the job (cf. Chiaburu & Marinova, 2005; Gist, Stevens & Bavetta, 1991; Harrison, Rainer, Hochwarter, & Thompson, 1997; Mathieu, Martineau, & Tannenbaum, 1993; Morin & Latham, 2000). Specific to exposing trainees to transfer strategies, Gist et al. (1991) found similar performance levels among high and low self-efficacy trainees when goal setting and self-management strategies were used together in a post-training transfer intervention than for participants exposed to goal-setting or self-management only conditions. In addition, self-efficacy has been found to be a strong predictor of trainee transfer and use of RP strategies in the post-training period (Hutchins, 2004), and post-training self-efficacy has been found to be positively related to transfer of training (Gaudine & Saks, 2004). Finally, some evidence exists for the malleability of trainee self-efficacy as a function of including the sources of self-efficacy development in post-training transfer interventions and in the methods used in training. For example, Gist (1986) found that participant self-efficacy and performance increased when mastery experiences and supportive feedback were included as a transfer intervention compared to no effect experienced by the control group.

In sum, the theoretical underpinnings of the RP model are well-grounded in both clinical and applied settings with varied populations. The appeal of

using RP strategies as a post-training transfer intervention is based on the fundamental role participant self-efficacy plays in performance; that is, to keep trainees resilient in using and maintaining trained skills in the unpredictable work setting. Although considerable space has been devoted to discussing the effectiveness of using RP strategies as a transfer of training intervention (cf. Bates, 2003; Broad & Newstrom, 1992; Holton & Baldwin, 2003; Marx & Burke, 2003), the published RP studies over the past 20 years in the corporate training arena have yielded quite mixed results. Thus, in the next section, we critically review the results across published RP studies in organizational transfer research to resolve the issues that have stalled further conceptual and practical advancements in this area.

### **RP Results in Training-Transfer Research**

In empirical RP research, some authors have found success in using varied combinations of Marx's (1982) articulated strategies to promote trainee-skill maintenance (Noe, Sears, & Fullenkamp, 1990; Tziner, Haccoun, & Kadish, 1991). Still others have found partial support for Marx's full RP model for trainee learning and ability to transfer (Burke, 1997) and in moderating the effect between perceived support for transfer in the work climate and skill maintenance (Burke & Baldwin, 1999). However, there are just as many studies that have not found the RP intervention useful in increasing trainee skill maintenance (cf. Gaudine & Saks, 2004; Hutchins, 2004; Richman-Hirsch, 2001; Wexley & Baldwin, 1986), thus rendering a questionable stance on whether there is indeed a benefit in exposing trainees to RP. Although the aim of learning RP strategies is to enhance the probability of early and continued success of trained skills, inconsistent results across transfer-research studies fail to avidly support the use of RP strategies as a transfer intervention compared to other successful strategies such as goal setting (Latham & Locke, 1979; Richman-Hirsh, 2001) and action planning (Broad & Newstrom, 1992).

*Analysis.* To explore the inconsistent results in empirical RP studies, the authors reviewed all published (or in press) studies that have used RP strategies as a transfer intervention since Marx's (1982) initial articulation. We conducted a cross-sectional database search (using EBSCO-Host) of peer-reviewed literature in the fields of business, psychology, and sociology. We did not limit literature to a publication date as most of the writing and research on RP has occurred within the past 15 years. Specifically, the keywords used that were most successful in locating the articles were *relapse prevention*, *training transfer*, *transfer of training*, and *skill maintenance*. In reviewing each study, we examined sample size and sample composition, the use and description of RP strategies in the study, and overall study design. Descriptions of each of the reviewed studies are captured in Table 1 and further described below.

*Conclusions.* In reviewing the eight RP studies in Table 1, we identified several recurring issues that may have contributed to the inconsistent results for RP in the corporate training venue. First, five of the eight studies reported insufficient sample size ( $n = 33$ ,  $n = 36$ ; see Table 1). Whether based on sample attrition problems or design issues, a low sample size ultimately limits the power of a statistical test to detect true differences in trainee-maintenance outcomes. The required sample size needed to produce statistically robust and meaningful results depends on levels of acceptability concerning power and effect size (Cohen, 1977) and, for factor analysis, the number of items in the measurement instruments (Stevens, 2002). In addition, two of the reviewed studies used college students as participants, which is a common criticism of research on training outcomes (Baldwin & Ford, 1988) due to the limited effect on generalizing results to organizational settings.

A second characteristic identified in the reviewed RP studies was the inconsistent or incomplete operationalization and application of RP strategies as a transfer intervention. Across the eight studies, only two illustrated both the order and type of RP steps and strategies articulated by Marx (1986). This lack of operational consistency across the reviewed studies has likely produced an incomplete test of Marx's proposed RP approach and its ultimate effectiveness. Perhaps the original RP approach is viewed by researchers as too cumbersome to test in its entirety, or perhaps RP has not undergone sufficient refinement (e.g., via psychometric analysis), thus tempting researchers to test alternative RP configurations.

Also related to the varied RP operationalizations used across the reviewed studies is the confounding effect that occurs when studies compare RP with indistinct transfer interventions.

For example, the defining characteristic of the studies not finding support for the RP intervention on trainee skill transfer was that it was compared to another transfer intervention that included similar RP-like strategies or a goal-setting step (a step already included in Marx's [1986] description of RP steps). Although in one study the author argued that less emphasis was given to goal-setting in the RP intervention (compared to the goal-setting intervention), the shared variance and thus confounding effect should not be overlooked as an influence on the lack of support found for the RP intervention. Another author identified the possibility of a contamination effect of trainee self-efficacy from the initial training (to which RP was appended). While testing self-efficacy as a mediator between the RP intervention and the dependent variables, this author noted that the instructional methods and activities used may have influenced trainee self-efficacy in addition to trainees learning RP strategies as a transfer intervention.

The final observation we made in our analysis concerned the way in which RP outcome data were collected. Half of the studies used trainee self-reports of skill maintenance as the only measure of transfer, thus limiting the comparison and fidelity of the skill maintenance outcome to just one

**TABLE 1: Summary of Empirical Findings on Tests of Relapse Prevention Training**

Study	Sample & Training	Marx (1986) RP Steps										
		SG	SL	CQ	CP	PS	MS	TP	RP Supported			
Wexley and Baldwin (1986)	<i>n</i> = 256 <sup>a</sup> , time management skills				X	X						No
Noe, Sears, and Fullenkamp (1990)	<i>n</i> = 71, supervisory skills	X	X	X	X <sup>b</sup>	X	X					Yes
Tziner, Haccoun, and Kadish (1991)	<i>n</i> = 81, train-the-trainer skills			X	X							Yes
Burke (1997)	<i>n</i> = 90 <sup>a</sup> , assertiveness skills		X	X	X	X	X	X	X			Partial
Burke and Baldwin (1999)	<i>n</i> = 33, coaching skills for managers	X	X	X	X	X	X	X	X			Partial
Richman-Hirsch (2001)	<i>n</i> = 367, customer service skills				X							No
Hutchins (2004)	<i>n</i> = 36, leadership skills for managers	X			X <sup>b</sup>	X	X					No
Gaudine and Saks (2004)	<i>n</i> = 174, nursing skills				X <sup>b</sup>							No

NOTE: SG = set skill goal; SL = identify slip and lapse; CQ = explicate +/• consequences of skills use; CP = learn coping skills; PS = predict first slip; MS = select coping skills to manage first slip; TP = track progress toward goal.

a. Student sample.

source. Another observation was the absence of attempts to measure the extent to which specific RP strategies were actually used in the post-training period or to assess the effect each RP step contributed to outcome variables. For example, all but one of the studies tested the RP intervention as a main effect (Noe et al., 1990) rather than examining the potency of specific RP components by isolating the contribution of each RP step to the overall outcome score. Three of the eight studies (Burke, 1997; Burke & Baldwin, 1999; Hutchins, 2004) did ask trainees to identify which RP steps were most useful to maintaining their skills. In sum, we contend that issues concerning study design, measurement, and interpretation have provided mixed results concerning the utility of using RP strategies as an effective transfer intervention.

### **Conceptual and Practical Implications for RP Testing**

Conducting transfer research may be one of the more tedious pursuits of all training areas. As illustrated by the Learning Systems Transfer Inventory (cf. Holton, Bates, & Ruona, 2000), describing and identifying multiple antecedents of training transfer can prove challenging when exploring the utility of transfer interventions. It is clear from the review of RP studies in this article that several implications exist to improve the design and analysis of future RP research. As with most research studies, there exists ample room for improvement and opportunities to advance the research domain; our suggestions for practice offer opportunities to refine studies that use RP as a transfer intervention to seek a fair test of its ultimate effectiveness.

*Theoretical considerations.* Useful in future RP empirical work will be the confirmation of mediating variables responsible for *why* RP influences transfer outcomes. Based on the reviewed conceptual and empirical support for the broader concept of self-efficacy in the training literature, one such mediating variable that should be further explored with regard to RP is the more targeted construct of ability to transfer. With initial support (Burke, 1997), ability to transfer is defined as the degree to which trainees are capable of coping with situations that threaten skill maintenance. In other words, a unique contribution of RP in solving the transfer dilemma is that it provides necessary coping skills trainees need to buttress their application of trained skills on the job; this targeted construct may help us elucidate RP's practical viability.

Another potential mediator explaining RP's effect on transfer includes readiness to change (Lawrence, 1999). When trainees are equipped with specific tools to help them deal with typical workplace diversions that otherwise chip away at their training action plans, it is likely they will be more open to alternative ideas and techniques presented in the training program and actually to implement them on the job. This supposition enjoys theoretical support from Bandura's (1982) notion of verbal persuasion, which argues that *realistic* strategies promote individual effort and persistence.

Other theoretical considerations include the exploration of moderating variables to clarify the nomological network explaining RP's influence on transfer. The most solid evidence in the literature, which appears central to understanding *when* RP is effective, is the transfer climate. Also receiving partial support (Burke & Baldwin, 1999), we see that Marx's (1986) seven-step adaptation of RP worked best in unsupportive work environments; this logic is consistent with how the RP model was originally designed to operate in the clinical setting (Marlatt & Gordon, 1985) and with Marx's (1986) articulation that the RP model presupposes suboptimal support and reinforcement from the trainee's environment. Therefore, Marx's adaptation of RP appears best incorporated when trainees face unsupportive work conditions, in which well-documented self-management skills (e.g., self-monitoring) can be used to actively guide and bolster the trainee's skill-retention efforts in the midst of minimal external reinforcement. These specific variables (e.g., ability to transfer, readiness to change, and transfer climate) should be conceptualized and operationalized in future RP studies; if we better understand why and when RP works, we can better understand its potential to be applied in other training contexts and audiences.

*Sample size and composition.* Because empirical transfer studies usually involve collecting data at several points to determine whether skills have been maintained since the original training, transfer researchers are often faced with multifaceted study designs. As Hutchins (2004) noted, conducting empirical transfer studies in applied settings is often fraught with limitations such as preserving an adequate sample size, garnering management approval and cooperation, and randomizing trainees. Such limitations often require transfer researchers to be diligent in the design, collection, and interpretation of data.

We offer two suggestions concerning sampling in future RP studies. First, the low sample size used in some of the reviewed RP studies likely influenced the sensitivity of the analytic methods used to explore the data and may have masked effects otherwise detected with larger samples. Given the longitudinal nature of transfer studies, it is important therefore that researchers attempt to secure sample sizes at the outset of the study that can endure the effects of subject attrition. Multiple plant sites and corporate locations, as well as larger initial training initiatives (to which RP is appended) could be sought. Second, although applied settings do not always lend themselves to easily attainable trainees, assessing the impact of training is almost always preferred in the actual setting to capture the richest data possible. As such, establishing and maintaining sufficient relationships with organizations, practitioners, and relevant organizations (e.g., ASTD) will be important for transfer researchers. Last, researchers may want to focus future RP inquiries on managers (given Marx's original focus) to assess whether RP produces better effects in certain organizational populations.

*Operationalizing the RP intervention.* Perhaps the most notable finding in the reviewed studies was the inconsistent descriptions and subsequent tests of the RP intervention. This has muddied the clarity of RP results in training research. Similar observations have been identified as a weakness in prior clinical RP studies (see Burke, 1996), and Bates (2003) in his review of transfer research, warned HRD researchers of impeding our understanding and advancement of transfer through flawed models, misinterpretation of findings, and measurement error. Ultimately, using varying operationalizations of the RP intervention limits researchers' ability to provide a fair test of the intervention and their ability to generalize results across populations, complicates attempts at conducting replication studies, and compromises the integrity of a potentially effective intervention.

Transfer researchers wanting to "test RP" likely need to revisit Bob Marx's (1982, 1986) original adaptation and implement it closely in their studies. Using his initial articulation, researchers might then conduct validation studies to further refine the theory under study, in part, to potentially identify a smaller-scale version of RP that is effective. As Henson, Capraro, and Capraro (2001) noted, factor analytic techniques such as exploratory or confirmatory analysis or structural equation modeling (SEM) can help bolster measurement integrity and help refine the concept or theory under study. Submitting instruments to validation studies also strengthens the analytic procedures and offerings of the training discipline and makes cross-study comparisons on transfer constructs possible (Holton et al., 2000).

Because the RP intervention includes a series of related steps, authors may ultimately discover that some components, when assessed separately, are more effective at helping trainees maintain their skills. For example, Burke and Baldwin (1999) modified Marx's original RP model to include only three steps of the full model (i.e., steps 4-6) given the success of pared-down models in prior training research (Noe et al., 1990; Tziner et al., 1991) and because Marlatt and Gordon (1980, p. 297) identified high-risk situations and associated coping skills as the "critical choice point" in RP. If future studies were to explore the contributing effect of each of the seven steps in the RP intervention, revisions to the RP intervention could be made, appropriately guided by and interpreted with extant theory, and factor analyzed to validate and potentially refine the model. Kieffer (1999) and Henson et al. (2001) offer excellent suggestions on designing and interpreting results from factor analyses. Ultimately, a reiterative, more analytic, and theoretically sound refinement of RP could be useful.

*Designing RP studies.* We offer several suggestions concerning the design of future RP studies. First, studies should include multiple sources of data concerning trainee-skill maintenance. Although important to gauge trainees' perception of their skill maintenance in the post-training period, triangulating these with multiple reports of skill maintenance (from colleagues, supervisors,

subordinates, customers) would provide a more complete report of trainee transfer (Kirkpatrick, 1998).

Second, and related to the varied RP operationalizations used in the studies reviewed, comparing RP with conceptually similar transfer interventions (in hopes of concluding which intervention is most efficacious) is problematic. Whereas goal-setting is one of the more commonly used transfer interventions, its use in comparison studies with the RP strategies confounds the true effect of both interventions on helping trainees maintain their training skills (as RP includes a goal-setting element). If researchers desire to continue such comparison studies, efforts should be taken to control for the shared variance or, perhaps, determine (through descriptive analysis) the specific contribution of the goal-setting step in the RP intervention to the overall effect. Doing so would clarify the role of goal-setting as a transfer intervention and the relationship between goal-setting and other RP steps to trainee-skill maintenance.

Third, although not listed in the table or the direct focus of this review, we also identified prior empirical transfer studies that used self-management interventions that were similar in steps to the RP model articulated by Marx (1986; cf. Gist, 1986; Gist et al., 1991). Perhaps this cross-pollination of self-management strategies and relapse prevention in the research lexicon has caused some confusion among researchers and may explain the discrepancy in defining and using RP as a transfer intervention. In brief, self-management strategies are techniques that help individuals identify and reinforce desirable behaviors (Wexley & Baldwin, 1986), whereas RP strategies focus on recognizing and overcoming trigger events that may cause an individual to relapse to pre-training behavior. Although RP is a member of the family of self-management techniques, it is conceptually distinct and should be afforded a fair test to examine its efficacy.

Finally, future studies might consider comparing skill-maintenance outcomes of trainees trained in RP as a post-training transfer intervention with those exposed to RP strategies as an integral portion of the initial training. All of the studies reviewed presented the RP intervention as additional training, rather than another learning experience within the skills training. Perhaps RP strategies could be used to support learning *and* transfer, thus making the focus on increasing trainee self-efficacy continuous throughout the training. Trainee exhaustion may alone inhibit trainees from taking RP seriously when linked to the end of half- or full-day training session ("No Time for Training," 2002).

## **Future Directions for RP**

In addition to our review of current RP research, we also look ahead to possible directions for researchers interested in exploring transfer interven-

tions and specifically the use of relapse-prevention strategies. Current trends in transfer research can provide some guidance in advancing our understanding of conducting future RP research. For example, rather than viewing transfer as a linear process, researchers are now exploring transfer as a complex system of individual, task, and organizational determinants. Case study reports by Broad (2003) and Holton (2003) demonstrate the usefulness of viewing transfer as a system and in using specific developmental and measurement procedures for capturing the multiple influences on supporting positive transfer in organizations. Similarly, more of a comprehensive approach could be used to guide future RP studies by testing for moderating or mediating impact of interpersonal or situational determinants to better elucidate the multiple contributors to positive transfer.

Applying and measuring RP should not be viewed in a vacuum but, rather, should be considered in concert with the larger milieu of which trainees are a part. As noted in their revised model of relapse determinants in clinical studies, Witkiewitz and Marlatt (2004) discuss the potency of individual and situational antecedents as being highly predictive of long-term behavioral maintenance. Similar relationships have also been found between situational determinants of support and positive skill maintenance in organizational training. Several studies have found transfer climate to moderate the effect of transfer interventions on skill maintenance (Burke & Baldwin, 1999; Gaudine & Saks, 2004; Richman-Hirsch, 2001) and identified employee perceptions of a supportive organizational learning culture as strongly associated with job satisfaction and motivation to transfer learning (Egan et al., 2004). Work environment variables (e.g., supervisor feedback, manager support or opposition, work group support, openness to change, and rewards) also make up the largest section of the LTSI-validated portion (cf. Holton, 2003), demonstrating the central focus that interpersonal and organizational factors play in supporting trainee skill maintenance.

## Summary

Designing, assessing, and reporting results of transfer studies continues to present a formidable challenge to researchers grappling with how to support positive training transfer amidst chaotic organizational life. To answer our initial question, “has RP received a fair shake?” we respond “probably not.” Low sample sizes, inconsistent and incomplete tests of the model, self-report measures, and comparisons with indistinct transfer interventions have all made a fair test of RP-intervention problematic. Given the sound grounding of the RP construct in social-cognitive theory, we owe RP a more stringent assessment to determine its worth as a transfer of training intervention. Although future studies will be challenging to design and orchestrate in appropriate field settings, rigorous examinations will afford us a clearer view of RP effectiveness and application.

## Appendix

---

### Exhibit I: Relapse Prevention Training Aid

Step 1. State the trained skill you wish to apply and maintain from this training.

Step 2. Set your skill maintenance goal, based upon this training.

*Set a specific, measurable, short-range goal. Then, specifically define a slip and a relapse.*

Skill Maintenance Goal: \_\_\_\_\_

Slip: \_\_\_\_\_

Relapse: \_\_\_\_\_

Step 3. Understand positive and negative consequences of using the skill at work.

- Positive Consequences of Using Your New Skills: . . . . .
- Negative Consequences of Not Using Your New Skills: . . . . .
- Positive Consequences of Not Using Your New Skills: . . . . .
- Negative Consequences of Using Your New Skills: . . . . .

Step 4. Apply the relapse prevention strategies to maintain trained skills.

<i>RP Strategy</i>	<i>Trainee Notes / Comments</i>
1. Understand the relapse process (i.e., slip, then relapse).	
2. Understand the difference between the training and job contexts.	
3. Create a support network.	
4. Be aware of subordinate skepticism of new skills.	
5. Identify high-risk situations.	
6. Apply skills in the appropriate setting.	
7. Understand seemingly unimportant behaviors that may lead to a relapse.	
8. Reduce interfering and unproductive emotions.	
9. Retain your self-confidence, despite slips.	
10. Diagnose support skills needed to maintain training.	
11. Review disruptive lifestyle patterns.	
12. Mix enjoyable and tedious work tasks.	
13. Diagnose support back at work for skill application.	

14. Create meaningful self-rewards for skill retention.

Step 5. Describe the nature of circumstances that will likely surround a first slip.

---



---

Step 6. Generate ideas for how you will deal with such difficult situations.

---



---

Step 7. Monitor your behavior at work with the self-monitoring record.

---



---

NOTE: Adapted from Burke, L. A. (1996). Improving transfer of training: A field investigation of the effect of relapse prevention training and transfer climate on maintenance outcomes. *Dissertation Abstracts International*, 57-04A, 1725.

## References

- Anthony, P., & Norton, L. A. (1991). Link HR to corporate strategy. *Personnel Journal*, 7, 75-86.
- Baiyin, Y., Watkins, K. E., & Marsick, V. J. (2004). The construct of the learning organization: Dimensions, measurement, and validation. *Human Resource Development Quarterly*, 15, 31-56.
- Baldwin, T. T., & Ford, K. J. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology*, 41, 63-105.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147.
- Bates, R. (2003). Training transfer: Progress and prospects. In A. Gilley, J. Callahan, & L. Bierma (Eds.), *Critical issues in HRD* (pp. 179-198). Cambridge, MA: Perseus.
- Broad, M. (2003). Managing the organizational learning transfer system: A model and case study. In E. F. Holton III & T. T. Baldwin (Eds.), *Improving learning transfer in organizations* (pp. 97-118). San Francisco: Jossey-Bass.
- Broad, M. L., & Newstrom, J. W. (1992). *Transfer of training: Action-packed strategies to ensure high payoff from training investments*. Cambridge, MA: Perseus.
- Burke, L. A. (1996). Improving transfer of training: A field investigation of the effect of relapse prevention training and transfer climate on maintenance outcomes. *Dissertation Abstracts International*, 57-04A, 1725.
- Burke, L. A. (1997). Improving positive transfer: A test of relapse prevention training on transfer outcomes. *Human Resource Development Quarterly*, 8(2), 115-128.
- Burke, L. A., & Baldwin, T. T. (1999). Workforce training transfer: A study of the effect of relapse prevention training and transfer climate. *Human Resource Management*, 38(3), 227-242.
- Cannon, M. D., & Witherspoon, R. (2005). Actionable feedback: Unlocking the power of learning and performance improvement. *Academy of Management Executive*, 19, 120-135.
- Chiaburu, D. S., & Marinova, S. V. (2005). What predicts skill transfer? An exploratory study of goal orientation, training self-efficacy, and organizational supports. *International Journal of Training and Development*, 9(2), 110-123.

- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences*. San Diego, CA: Academic Press.
- Danielson, C. C., & Wiggenhorn, W. (2003). The strategic challenge for transfer: Chief learning officers speak out. In E. F. Holton, III & T. T. Baldwin (Eds.), *Improving learning transfer in organizations* (pp. 16-38). San Francisco, CA: Jossey-Bass.
- Egan, T. M., & Yang, B., & Bartlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly*, 15(3), 279-301.
- Gaudine, A. P., & Saks, A. M. (2004). A longitudinal quasi-experiment on the effects of post-training transfer interventions. *Human Resource Development Quarterly*, 15(1), 57-76.
- Gist, M. (1986). The effects of self-efficacy training on training task performance. *Academy of Management Proceedings*, pp. 250-255.
- Gist, M. E., Stevens, C. K., & Bavetta, A. G. (1991). Effects of self-efficacy and post-training intervention on the acquisition and maintenance of complex interpersonal skills. *Personnel Psychology*, 44, 837-861.
- Goodman, J. S., & Wood, R. E. (2004). Feedback specificity, learning opportunities, and learning. *Journal of Applied Psychology*, 89, 809-822.
- Harrison, A. W., Rainer, R. K., Jr., Hochwarter, W. A., & Thompson, K. R. (1997). Testing the self-efficacy-performance linkage of social-cognitive theory. *Journal of Social Psychology*, 137(1), 79-87.
- Henson, R. K., Capraro, R. M., & Capraro, M. M. (2001). *Reporting practice and the use of exploratory factor analysis in educational research journals*. Paper presented at the annual meeting of the Mid-South Educational Research Association, Little Rock, AR.
- Holton, E. F. (2003). What's really wrong: Diagnosis for learning transfer system change. In E. F. Holton III & T. T. Baldwin (Eds.), *Improving learning transfer in organizations* (pp. 97-118). San Francisco, CA: Jossey-Bass.
- Holton, E. F., & Baldwin, T. (2003). Making transfer happen: An action perspective of learning transfer systems. In E. F. Holton III & T. T. Baldwin (Eds.), *Improving learning transfer in organizations* (pp. 3-15). San Francisco, CA: Jossey-Bass.
- Holton, E. F., Hsin-Chih, C., & Naquin S. (2003). An examination of learning transfer system characteristics across organizational settings. *Human Resource Development Quarterly*, 14(4), 459-483.
- Holton, E. F., Bates, R. A., & Ruona, W. E. A. (2000). Development of a generalized learning transfer system inventory. *Human Resource Development Quarterly*, 11(4), 333-360.
- Hutchins, H. M. (2004). *Enhancing skill maintenance through relapse prevention strategies: A comparison of two models*. Unpublished doctoral dissertation, University of North Texas, Denton.
- Kieffer, K. M. (1999). An introductory primer on the appropriate use of exploratory and confirmatory factor analysis. *Research in the Schools*, 6(2), 75-92.
- Kirkpatrick, D. (1998). *Evaluating training programs: The four levels* (2nd ed.). San Francisco, CA: Berrett-Koehler.
- Kreitner, R., & Luthans, F. (1984). A social learning approach to behavioral management: Radical behaviorists "mellowing out." *Organizational Dynamics*, 13, 47-65.
- Lankau, M. J., & Scandura, T. A. (2002). An investigation of personal learning in mentoring relationships: Content, antecedents, and consequences. *Academy of Management Journal*, 45, 779-791.
- Latham, G. P., & Locke, E. A. (1979). Goal setting—A motivational technique that works. *Organizational Dynamics*, 6, 68-80.
- Lawrence, T. (1999). A stage-based approach to behaviour change. In E. Perkins, I. Simnett, & L. Wright (Eds.), *Evidence-based health promotion* (pp. 64-75). New York: John Wiley.
- Locke, E. A., Shaw, K. N., Saari, K. N., & Latham, G. P. (1981). Goal setting and task performance: 1969-1980. *Psychological Bulletin*, 90(1), 125-152.

- Machin, M. A., & Fogarty, G. J. (2003). Perceptions of training-related factors and personal variables as predictors of transfer implementation intentions. *Journal of Business and Psychology, 18*(1), 51-71.
- Marlatt, G. A., & Gordon, J. R. (1980). Determinants of relapse: Implications for the maintenance of behavior change. In P. O. Davidson & S. M. Davidson (Eds.), *Behavioral medicine: Changing health life styles* (pp. 410-452). New York: Brunner/Mazel.
- Marlatt, G. A., & Gordon, J. R. (Eds.). (1985). *Relapse prevention: Maintaining strategies in the treatment of addictive behaviors*. New York: Guilford.
- Marx, R. D. (1982). Relapse prevention for managerial training: A model for maintenance of behavioral change. *Academy of Management Review, 7*, 433-441.
- Marx, R. D. (1986). Improving management development through relapse prevention strategies. *Journal of Management Development, 5*(2), 27-40.
- Marx, R. D., & Burke, L. A. (2003). Transfer is personal: Equipping trainees with self-management and relapse prevention strategies. In E. F. Holton III & T. T. Baldwin (Eds.), *Improving learning transfer in organizations* (pp. 227-242). San Francisco, CA: Jossey-Bass.
- Mathieu, J. E., Martineau, J. W., & Tannenbaum, S. I. (1993). Individual and situational influences on the development of self-efficacy: Implications for training effectiveness. *Personnel Psychology, 46*, 125-147.
- Morin, L., & Latham, G. P. (2000). The effect of mental practice and goal setting as a transfer of training intervention on supervisors' self efficacy and communication skills: An exploratory study. *Applied Psychology: An International Review, 49*(3), 566-578.
- Newstrom, J. W. (1986). Leveraging management development through the management of transfer. *Journal of Management Development, 5*(5), 33-45.
- No time for training. (2002, February). *Training, 39*(2), 18.
- Noe, R., Sears, J., & Fullenkamp, A. (1990). Relapse training: Does it influence trainees' posttraining behavior and cognitive strategies? *Journal of Business Psychology, 4*, 319-328.
- Richman-Hirsch, W. L. (2001). Post-training interventions to enhance transfer: The moderating effects of work environments. *Human Resource Development Quarterly, 12* (2), 105-120.
- Santos, A., & Stuart, M. (2003). Employee perceptions and their influence on training effectiveness. *Human Resource Management Journal, 13*, 27-46.
- Stevens, J. P. (2002). *Applied statistics for the social sciences* (4th ed.). Mahwah, NJ: Erlbaum.
- Swanson, R. A. (2003). Transfer is just a symptom: The neglect of front-end analysis. In E. F. Holton III & T. T. Baldwin (Eds.), *Improving learning transfer in organizations* (pp. 119-137). San Francisco, CA: Jossey-Bass.
- Tziner, A., Haccoun, R., & Kadish, A. (1991). Personal and situational characteristics influencing the effectiveness of transfer of training improvement strategies. *Journal of Occupational Psychology, 64*, 167-177.
- Vera, D., & Crossan, M. (2004). Strategic leadership and organizational learning. *Academy of Management Review, 29*, 222-241.
- Wexley, K., & Baldwin, T. (1986). Posttraining strategies for facilitating positive transfer: An empirical exploration. *Academy of Management Journal, 29*, 503-520.
- Witkiewitz, K., & Marlatt, G. A. (2004). Relapse prevention for alcohol and drug problems: This was Zen and this is Tao. *American Psychologist, 59*(4), 224-235.

*Holly M. Hutchins (Ph.D.) is an assistant professor of human resource development in the College of Technology at the University of Houston (main campus) in Houston, TX. She received a doctorate in applied technology and training and development from the University of North Texas.*

*Lisa A. Burke (Ph.D.) is an associate professor and chair of the Department of Management and Marketing at Louisiana State University–Shreveport. She received a doctorate in organizational behavior and human resources management from the Indiana University Kelley School of Business.*