

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI[®]

Bell & Howell Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600

**MANAGERS' REACTIONS TO TRANSFER INTERVENTION TYPE
AND
INFORMATION ABOUT UTILITY ANALYSIS**

Philip Huint

A Thesis

in

The Faculty of Commerce and Administration

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Administration at
Concordia University
Montreal, Quebec, Canada

March 1999

© Philip Huint, 1999



National Library
of Canada

Acquisitions and
Bibliographic Services

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale
du Canada

Acquisitions et
services bibliographiques

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-39085-3

Canada

NOTE TO USERS

Page(s) not included in the original manuscript are unavailable from the author or university. The manuscript was microfilmed as received.

ii

UMI

Abstract

Managers' Reactions to Transfer Intervention Type and Information about Utility Analysis

Philip Huint

The reactions of managers to the proposal of two transfer of training interventions under two types of information criteria was studied. Relapse prevention, an individual transfer intervention model added to a training design, was compared to a proposal to train managers in supervisory support issues, considered an intervention to improve the work environment. Information was provided about research results to justify the transfer proposal as compared to an estimate of returns from the training provided by utility analysis procedures. No statistically significant results were found for either intervention, however, the utility analysis information was not as well received as the research information to justify the intervention. As well, no significant difference in preference was found between the two transfer interventions proposed, however, contrary to the first hypothesis, the supervisory training program seemed to be as likely a choice for managers as relapse prevention training aimed at employees. It would seem from this study that managers realize that the transfer environment is an important factor in transfer of training.

Acknowledgements

“ If I have seen further, it is by standing on the shoulders of giants.”

-Sir Isaac Newton, 1675

I wish to thank Dr. Alan Saks for his remarkable and insightful teaching style, his support and his availability that has allowed me to develop some useful competencies in the areas of selection, training and transfer of training interventions. Due in large part to his commitment to students and to his profession, I have been able to complete this large part of my studies with success.

I also wish to thank my wife, Jennifer, for her constant support and untiring encouragement during my many years of part time study.

As well, I wish to thank Dr. Steven Appelbaum and Dr. Vishwanath Baba for their encouraging comments, participation and collaboration throughout my student life at Concordia and especially in my thesis preparation.

Finally, I wish to recognize Dr. Robert Haccoun, University of Montreal, for his availability and precious commentaries about my thesis subject over the last few years.

Table of Contents

List of Tables _____	VI
Introduction _____	1
Transfer of training model _____	3
Focus of transfer Intervention _____	3
Transfer design and Relapse Prevention model _____	5
The work environment and supervisor support _____	5
Management decision about transfer _____	8
Acceptability of Utility Analysis Information _____	9
Method _____	17
Sample _____	17
Design _____	17
Materials _____	19
Measures _____	25
Results _____	27
Discussion _____	32
Contribution to transfer of training research _____	37
Contribution to utility analysis research _____	38
Practical implications _____	39
Conclusion _____	41
References _____	42
Appendix 1 _____	49
Appendix 2 _____	54

List of Tables

Table 1 - Means, Standard Deviations and Number of subjects (N) _	28
Table 2 - Tests of Between – Subjects Effects _____	28
Table 3 - Transfer type- means, standard deviations, number of respondents (N) and significance _____	30
Table 4 - Information type- means, standard deviations, number of respondents (N) and significance _____	31

Introduction

Organizations are now faced with continuous change to which they must adapt in order to be able to survive. Reengineering and downsizing have changed the work processes resulting in considerable changes to the way work is carried out and an expansion in the responsibilities associated with all jobs. Labib and Appelbaum (1994) point out that one of the important human resource components of downsizing is to take steps to allow employees to upgrade knowledge, skills and abilities through retraining. These changes have forced organizations to increase their spending on training issues in a dramatic fashion in the last two decades. Pfeffer (1995) suggests that a workforce is a source of strategic advantage and that an integral part of work systems has involved training and skill development. Pfeffer (1995) gives an example of a carpet plant where, following a training program, not only did they find that productivity went up 10% but absenteeism was cut by almost half. These are the issues facing managers today, at a time when all decisions need to be made with little time and a pre-occupation with the bottom line and maintaining a competitive edge is the norm.

A survey of 1000 American organizations revealed that nearly 90% had developed or used training programs (Saari, Johnson, McLaughlin and Zimmerle, 1988). The annual sums devoted to training in American organizations has been estimated to be as high as \$180 billion (Tannenbaum and Yukl, 1992) to \$200

billion (McKenna, 1990). Canadian companies are reported to spend \$4 billion annually on training and development (Belcourt and Wright, 1996).

Training in organizations, therefore, as a very costly endeavor, presently needs to be delivered and organized in a way that creates a maximum benefit for the organization. With this in mind, transfer of training has become an important issue in the overall context of maximizing training benefits. Moreover, utility analysis, as a process that may be used to estimate and identify the monetary benefits derived from training, is a feasible tool to be used by human resource practitioners in justifying training investments.

This increased need for training is also creating a need to know the effectiveness of training programs in producing measurable results. The degree to which the newly learned techniques, skills and abilities, resulting from the training program, are then used and maintained in the work environment, thereby converted into an increase in work output, is known as the level of transfer of training. Baldwin and Ford (1988) proposed a model of the transfer process as a framework for describing the transfer process. Their review acknowledged that it was at this point in the training process that a problem existed and proposed a direction for future research. Other researchers have also identified that there continues to be a low level of transfer of learned behaviours to the work environment (Tannenbaum and Yukl, 1992).

The level of transfer has been reported to be as low as 10% (Georgenson, 1982). More recent research has reported a less dismal picture varying from as high as 62% immediately after training to 34% one year after training (Saks and Belcourt, 1997). Objective performance data continues to be very difficult to obtain in measuring transfer issues. This has led to a degree of unreliability in the data since much of this data is based on self-reported information (Haccoun and Saks, 1998).

Transfer of training model:

In their model of the transfer process, Baldwin and Ford (1988) propose that both training outcomes and input factors have an effect on the amount of transfer. The training input factors proposed are training design, work environment characteristics, and trainee characteristics. While all three factors, in their model were expected to have a direct effect on learning and retention and, thereby, an effect on transfer, the latter two were hypothesized to have an additional direct effect on transfer regardless of initial learning. They suggest that even well learned items from the training program may not be directly applied on the job due to a lack of motivation (a trainee characteristic) or supervisory support (a work environment factor).

Focus of transfer intervention

Following their suggestions, researchers have recently focused on training design factors such as relapse prevention as a post-training intervention included

at the time of the training. Relapse prevention programs teach individuals to understand and cope with the problem of relapse in terms of the application of learned behaviors taught in the training program. This is then expected to facilitate long termed maintenance of these behaviors (Marx, 1983).

Researchers have also looked at work environment factors such as supervisory support issues. However, Baldwin and Ford (1988) reported that they had not located any studies “in which an intervention was made to change the work environment and the effects of those changes on the extent of transfer was examined.”(p. 82). Supervisor support is posited to affect the post training application of newly acquired skills, for example in terms of the opportunity to use training, and praise or recognition given by supervisors. The pre-training environment may also be affected in terms of trainees’ motivation to attend the training and their expectations of future performance requirements. Cohen (1990) reviewed contextual factors and suggested how these factors may predict the influence of the pre-training environment on training results. Supervisory supportiveness was one of the factors which she considered and concluded that “if a supervisor encourages an employee, the training program, and the employee’s participation in the training, then the employee is more likely to exert effort in the training program” (p. 392). Enhancing pre-training motivation in the work environment has been shown to translate to an increase in learning and transfer (Haccoun and Saks, 1998).

Training design and relapse prevention models

In terms of training design at the individual trainee level, “the fundamental approach consists in integrating into the training program, behaviour maintenance interventions whose purpose it is to help the individual trainee better manage the skill usage problem once the individual returns to work” (Haccoun, Labrèche and Saks, 1997, p.4). One of the approaches that falls under this paradigm is known as Relapse Prevention models. These models were derived from the clinical intervention of relapse prevention designed by Marlatt and Gordon (1980) and proposed by Marx (1983) as a tool to be used in the enhancement of transfer of training. Environmental inoculation approaches such as Relapse Prevention, based on cognitive and behavioural self-control strategies (Marx, 1983), “are designed to help trainees recognize work cues which inhibit new skill usage on the job” (Haccoun, Labrèche and Saks, 1997, p. 4).

Haccoun, Labrèche and Saks (1997), in their meta-analysis, found that the effect of Relapse Prevention was very stable and suggested that it can raise the transfer level by more than 14% based on the three studies reviewed.

The work environment and supervisor support

The role of the work environment and more particularly the role of supervisory support have been identified as important in the transfer process. Insuring that trainees have the opportunity to use newly learned skills, providing

praise and other extrinsic rewards and supporting environments are all important for transfer to occur. According to Baldwin and Ford (1988) “the extent to which the supervisor behaves in ways congruent with the training objectives will have a major impact on the transfer of trained skills by the subordinates” (p. 93). As mentioned previously, the role played by supervisory support is also important in the pre-training environment. Baldwin and Magjurka (1991) found that trainees reported greater intentions to transfer learning to their job tasks when they were given prior information that their supervisor would hold them accountable and that training was mandatory.

Two related studies were found to support the notion that supervisor support is an important factor to implement and study empirically. In a recent study in China, Xiao (1996) found that human factors, particularly supervision, were the most influential variables in training transfer. “This indicates that if basic work design is adequate in a workplace, trained employees believe that supervisors have the strongest effect on their transfer behavior.” (Xiao, 1996, p. 70). Moreover, in a field study Brinkerhoff and Montesino (1995) found that there was a “significantly higher training usage and a more positive perception regarding the forces that encourage transfer of training within the work environment among the trainees who received the management support interventions.”(p. 263). They did not rigorously control their study conditions. However, the study demonstrated substantial intervention effects and was used to

encourage supervisors to implicate themselves more in the training transfer process.

From the literature it is possible to conclude that the use of relapse prevention programs has been well accepted and has resulted in measurable positive results. Favourable reactions are, therefore, expected for relapse prevention in this context. On the contrary, the literature seems to have identified a reticence to interventions that attempt to change the work environment, such as supervisory support training. Since the Baldwin and Ford (1988) suggestion to increase such studies and interventions has been made, not one of the reported studies reviewed by Haccoun and Saks (1998) focused on changing organizations to support training and this very point is made by the authors in their report on training issues. Consequently, programs designed to increase supervisory support for training, although well founded based on research findings, have not been well sold to management, particularly at the upper levels. Haccoun and Saks (1998) suggest that the organizational influence required to accomplish this type of change has not been given to the training function in organizations. It may be that as the newly designed organizations, with empowered work forces, refocus the job of management on developing coaching and motivational skills that this type of training in supervisory support for training will become the need and, therefore, the demand. For the time being, it appears that managers are more likely to accept interventions provided in the training program and directed at trainees.

The following hypothesis is, therefore, retained from the above review of the literature:

Hypothesis 1: A relapse prevention program as a transfer intervention, which is added to a training program given to employees, is more likely to receive favourable reactions from managers than a training program in supervisory support issues given to managers.

Management decisions about training

Managers and organizations are faced with the task of having to allocate training resources to meet training needs while the relationships between this allocation of resources, actual transfer of training and performance improvements are not necessarily well quantified in most organizations. It is not clear how to convince managers to consider and to decide on using these new training techniques, involving transfer interventions. It is important, therefore, to study managers' reactions to descriptions of such programs in the context of allocating training investments.

The decision process seems to involve the ability to use the information provided in the justification of the proposal to justify the expense to superiors and the perception of credibility assigned to the presenter. Dutton and Ashford (1993) elaborate on such issue selling as a process that is crucial to understanding how and where top management allocates its valuable time and attention. Part of their explanation of this process involves issue packaging which refers "to how

an issue is linguistically framed, the way an issue is presented and how an issue's boundaries are established" (p. 410). This explanation further complicates the decision making process that managers follow when making decisions about choosing training programs and the type of information they value within their organizational contexts. Research has not yet focused on identifying the best way to sell managers on the values and use of transfer interventions. However, Dutton and Ashford (1993) further advise that "the more an issue seller portrays an issue succinctly, the greater the level of top management's attention invested in an issue" (p. 416). The present study will, therefore, attempt to establish how managers react to information concerning the above mentioned transfer interventions in making decisions about training programs.

Acceptability of utility analysis information

The increased level of expenditure on training has also provoked a desire to better understand the level of the return on such investments that have become a recurrent expense for organizations on an annual basis. This expense can not be seen as a cost of doing business but rather must be justified in a quantifiable manner in the same way that new equipment can be estimated to improve productivity, thereby producing a dollar return on the expense. This need, therefore, has renewed interests in utility analysis as a decision making tool or process. It is important, therefore, to study managers' reactions to the use of utility analysis information in quantifying expected returns for training interventions and programs.

The mathematical equations used in utility analysis were developed over 40 years ago but have been difficult to apply because of problems computing the estimates of some of the values in the equation. Recently, new estimation methods have been developed and improved formulations of the equations and concepts have resulted in a wider application of utility analysis procedures (Schmidt, Hunter, McKenzie and Muldrow, 1979; Cascio, 1980; Schmidt, Hunter and Pearlman, 1982; Landry, Farr and Jacobs, 1982; Boudreau, 1983; Boudreau, 1984; Cronshaw and Alexander, 1985; Casio and Ramos, 1986; Alexander and Barrick, 1987; Steffy and Maurer, 1988; Raju, Burke and Normand, 1990; and Becker and Huselid, 1992). Perhaps the biggest problem addressed in these reformulations of utility analysis procedures has been the estimation and valuation of the standard deviation of the criterion (performance) distribution in dollars (SDy). The utility literature refers to this problem as one of estimation (Schmidt et al, 1979). Steffy and Maurer (1988) also add that it is a qualitative issue of valuation in terms of which concepts are included in determining the criteria on which the estimation should be based. This type of debate continues to account for some of the reasons that utility analysis estimations of the return on investments, regarding human resource programs, are not as commonplace in industry in comparison to other innovations that also have their roots in industrial psychology.

According to Cascio (1991), utility analysis is a process that reviews costs and expected consequences of decisions and therefore, is well suited to business

applications such as human resource development programs. Managers must weigh alternative objectives and solutions to problems and utility analysis allows for these alternatives to be quantified in dollar terms. According to Carr (1988), the general use of utility analysis procedures “will enable human resources managers to assume a businesslike orientation toward their function and become more strategic players in the organizational game” (p. 146).

This suggestion was tested by Latham and Whyte (1994) and Whyte and Latham (1997) in two studies that were designed to measure how utility analysis influenced decision making by managers about the implementation of a valid selection procedure. They found that including information about utility analysis and resulting returns to the organization reduced the support managers reported for such a selection procedure. Latham and Whyte (1994) concluded that the managers neither based their decision on the costs and benefits contained in the utility analysis information nor on the information contained in an expectancy table but rather seemed to accept the information provided in a straightforward validation procedure. In a follow-up study, Whyte and Latham (1997), used an expert in utility analysis to explain on video the underlying assumptions of the procedure, the fact that this procedure had been well researched, that many organizations have relied on it for a long time and the benefits of using this type of information in decision making. Following the video, the expert in person was available to answer questions about utility analysis in general or the specific example used in the study. They concluded that “even an expert, however, could

not persuade managers to overcome their reluctance to rely on the information provided by a utility analysis” (p. 608) and that “these results do not support the use of utility analysis as a tool to assist managerial decision making” (p. 608). Cronshaw (1997), the expert used by Whyte and Latham (1997), wrote a commentary about their research findings. He concluded that it is probable that utility analysis, under informational rather than persuasive conditions, may still enhance managerial decision making.

In a follow-up study by Hazer and Highhouse (1997) “managers’ reactions to utility analysis were investigated as a function of how the standard deviation of performance (SDy) in dollars was estimated, how the ultimate utility estimate was framed, and what human resource (HR) program was being analyzed” (p. 104). The human resource programs proposed were a selection intervention and a training program. Results of this study showed that managers accepted utility analysis the most when the most simple calculation of the standard deviation of performance (SDy) was presented, which is referred to as the 40% salary method. Additionally, they found that managers having a higher comprehension of utility analysis were not affected by the presentation of the proposal as a potential monetary gain or opportunity cost. However, managers having a lower level of comprehension of utility preferred the opportunity cost frame for the proposal. They found no effects for the type of human resource intervention on managers.

Hazer and Highhouse (1997) found that the means for perceived usefulness of the utility information were above the midpoint of the scale. This led them to conclude that the question of acceptance by managers, of the notion that human resource program effectiveness can be measured in dollars, remains an open question. They also reported that “these findings are consistent with those of Beckstein and Gilliland (1996), who found that managers were not differentially influenced by utility information presented for a selection program versus a training program” (p. 110). In contrast to the findings reported above, Boudreau and Smith (1993) have found that managers responded positively to utility analysis information concerning a training program proposal.

Carson, Becker and Henderson (1998) tried to replicate and further study the findings of Latham and Whyte (1994). They reported on two studies conducted using the stimulus material that had originally been used by Latham and Whyte (1994) with additional material developed from these original scenarios. The purpose of their studies was to verify if utility analysis information would be more acceptable if the complexity was reduced and the comprehensibility increased in the scenarios. In their first study, they proceeded to revise the material originally used by adding a paragraph concerning validity coefficients to the validity-only scenario increasing the text size from 365 to 485 words. For the validity + utility scenario, a major revision deleted the technical jargon and unnecessary words to reduce the scenario from 1550 to 772 words. Their findings revealed that the original scenarios used by Latham and Whyte

(1994) did not replicate the original findings despite the fact that a similar population of managers attending Executive MBAs were used for the study. Furthermore, they found that the revised scenario for validity + utility was rated as more understandable while the other modification to the validity-only condition was not significantly different. However, in comparing the revised scenarios for validity + utility, which they predicted would give higher acceptability ratings to the validity-only which they predicted would be lower, they found that the mean difference was in the predicted direction but that this contrast was not significant.

In a second study, Carson, Becker and Henderson (1998) modified their revised validity + utility scenario to include more information about the standard deviation of performance (SDy) estimation procedure which had been reduced to one sentence in the first revision. The two original Latham and Whyte (1994) scenarios and the two revised utility scenarios were used. They reported that the Latham and Whyte effect was not replicated once again. The comparison of the two revised versions of the utility scenario was not significantly different. Furthermore, they found that the manner of presentation does influence the evaluation of the material presented in that the comparison of the original utility material with the revised utility material was found to be significant. There was a significant difference in the understanding of the material and the acceptability levels of the material presented to the participants. They concluded that practitioners should be encouraged to find ways of using utility information in

presentations concerning selection decisions and that researchers should concern themselves with ways that human resource proposals can be presented in an optimal fashion.

In his survey of organizational human resource practices, Johns (1993) found that given their high degree of technical merit, techniques advocated by industrial and organizational psychologists were considerably underutilized. He pointed out that managers tend to downplay the technical aspects of such techniques and to perceive these more as management style. This conclusion is supported by Bamberger and Fiegenbaum (1996) in their development of a theory explaining that managers' decisions about human resource programs are shaped by a combination of technical, organizational, rational-economic and political forces. A similar survey of applied psychologists and human resource professionals, reported by Macan and Highhouse (1994), concluded that managers were concerned about bottom line aspects of programs but did not respond well to utility analysis as it was difficult to understand and explain. They pointed out that future research should focus on understanding some of the factors that may play a role in the acceptance of such information by management.

A second purpose of the present study is to contrast managers' reactions to utility information regarding the proposed transfer interventions as compared to a statement concerning research findings.

It is felt that despite the modifications made to the presentation of the utility analysis information, the studies cited above have not reported a high acceptance of this procedure as valid and still seems to have produced lower credibility for the consultant's proposal and lower acceptance of the consultant. In one of the original studies the consultant was present but received no questions after his presentation of the utility material (Whyte and Latham, 1997). This type of reaction may contribute to the rejection rate of transfer of training programs if used as a justification tool. On the contrary, managers are quite use to receiving information about pilot studies and research information that is technically less complicated. Although this type of information can not quantify the expected results, it seems to be preferred as a safe manner to justify expenses without creating expectations of a given level of return. This type of information may be preferred and contribute to a higher level of acceptance of transfer of training programs, in general terms.

From the above, and considering the issue selling points mentioned by Dutton and Ashford (1993), the following second hypothesis is suggested:

Hypothesis 2: Information about research findings presented in support of a transfer of training intervention is more likely to receive favourable reactions from managers than utility analysis estimates of returns in dollars.

Method

Sample

The sample consisted of 155 managers and graduate students attending an EMBA program, an MBA program or having graduated from an EMBA program (1992- 1998) from an eastern Canadian university. Four scenarios with attached questionnaires were randomly distributed to two EMBA classes (35 participants) and two MBA classes (43 participants). The four scenarios were also mailed to 205 EMBA graduates from the classes of 1992 - 1998 of which 77 returned a completed questionnaire.

The mean age of participants was 37.6 years, and the mean number of years of full-time work experience was 15.1 years. There were 48 (31%) female participants and 107 (69%) male participants. The following reported work experience in a) finance or accounting, 78 (50.3%), b) human resources, 73 (47.1%), and c) training and development, 91 (58.7%). 128 participants reported working in the private sector and 24 reported working in the public sector. Only 16 participants reported being full-time students, unemployed during their studies, or did not answer the job type question.

Design

This study employed a randomized, 2 X 2 (Transfer X Information) factorial design. The factors were called Transfer (Relapse Prevention,

Supervisor Support) and Information (Research, Utility Analysis). The aim was to determine the effect of type of transfer intervention (individual/trainee centered or environment/supervisor focused) and the type of information (research information or utility analysis estimates) provided by a consultant psychologist, on a participant's decision to implement the transfer intervention.

Four scenarios were developed from the stimulus material used by Carson, Becker and Henderson (1998) and are described below. Only one of the four scenarios was evaluated by each participant. The cooperation of the instructors of the EMBA program and the two MBA classes was obtained and the scenarios were randomly distributed to students in the classes and at other meeting times. The students were informed that this study was being carried out for a master's level thesis and that it was about how managers make human resource decisions. They were told that there were four different scenarios and asked not to discuss the scenarios with colleagues until they had completed the questionnaire. For the graduate EMBA group, 205 scenarios were randomly mailed out to the graduates from 1992-1998 that were listed as living in Canada by the EMBA office. A stamped return envelope was enclosed and a letter presented the study in similar terms as mentioned to the participants in the classes. Because scenarios were distributed in a random fashion among the three groups and not all the scenarios mailed were returned, the sample sizes for the four conditions were slightly uneven, ranging from 35 to 42. Data for 7 (4.5%) were incomplete for the descriptive statistics and tests of between subjects effects. The data obtained

from these participants was included in the demographic characteristics if the information was provided. The instruction sheet requesting the demographic data and introducing the scenario can be found in appendix 1.

Materials

The revised validity-only condition scenario developed from the stimulus material used by Carson, Becker and Henderson (1998) was used as a basis for developing two scenarios, one for each transfer condition (Relapse Prevention / Supervisor Support) associated with the first information condition (Research Information).

Transfer conditions:

One scenario included a proposal from a consultant for a transfer of training intervention called “Relapse Prevention” which was to be added to the training program that was designed to increase the productivity of clerical/administrative personnel. Participants were asked to imagine that they were the vice-presidents of human resources in a large Canadian multi-national corporation in which a consultant psychologist had been retained to make a proposal regarding training following a needs-analysis. The consultant was reported as having researched the issue of transfer and proposed steps in the application of a solution. Step 1 involved doing a transfer of training audit in order to identify the extent of the transfer problem. Step 2 involved a needs-

assessment specifically related to transfer issues in order to identify the major obstacles and barriers to transfer. Step 3 was the following:

“The results of the transfer of training audit and needs assessment will be used to develop a transfer of training intervention. This will involve the development of a training program for trainees’ called “Relapse Prevention”. One of the most significant obstacles to the transfer of training is trainees’ inability to cope with the barriers in the work environment. Trainees’ ability to anticipate and cope with the work environment is one of the most significant keys to resolving the problem of transfer of training. Preparing trainees for relapses can greatly strengthen the likelihood that they will apply the training material on the job. The Relapse Prevention training will inform trainees of the barriers to transfer of training in the organization, and what they can do to cope with them when they are encountered in order to continue to apply the training material. This will include factors such as identifying transfer obstacles, anticipating transfer obstacles, reasons for relapses, and developing strategies and coping mechanisms for dealing with transfer obstacles and relapses. For example, trainees will be trained on the difficulties of applying training material in their work environment, how to anticipate barriers, and how to prepare for barriers and relapses prior to and subsequent to the training.”

The other scenario was identical except that the psychologist proposed a training program for trainees' managers called "Supervisor Support". Step 3 in this case was the following:

"The results of the transfer of training audit and needs assessment will be used to develop a transfer of training intervention. This will involve the development of a training program for trainees' managers called "Supervisor Support". One of the most significant obstacles to the transfer of training is the lack of support from managers. Managers hold one of the most significant keys to resolving the problem of transfer of training. Support from the trainee's manager can greatly strengthen the likelihood that trainees will apply the training material on the job. The Supervisor Support training will inform managers of the barriers to transfer of training in the organization, and what they can do to improve the transfer of training of the clerical/ administrative personnel. This will include factors such as goal-setting activities, how and when to provide encouragement and support, reinforcement activities, and modeling of behaviours. For example, supervisors will be trained to discuss the content and benefits of the training program and to set goals with employees prior to and subsequent to the training."

The cost of the training program and the additional cost of the transfer intervention were reported as identical for both scenarios. These two scenarios

represented the two Transfer conditions, Relapse Prevention and Supervisor Support.

Information conditions:

For the first information condition, Research Information, each of the above transfer conditions ended with a paragraph stating that research published regarding transfer of training interventions has been found to improve transfer and a statement about either Relapse Prevention or Supervisor Support was made.

The text of the research information condition was the following:

“Research published on the transfer of training has found that transfer of training interventions can improve the transfer of training. Relapse Prevention interventions (Supervisor Support and encouragement) have been shown to have a significant effect on the transfer of training and the effectiveness of training programs. Therefore, Relapse Prevention (Supervisor Support) training is expected to improve the transfer of training and productivity of the clerical /administrative personnel.”

For the second information condition, the Utility Information scenario was developed from the revised validity-utility condition used in the Carson, et al (1998) study. This scenario was identical to the Research Information condition except that the paragraph regarding research was replaced by two paragraphs about utility. The first stated that costs should be evaluated and that utility

analysis was a process used to estimate the overall gain in productivity. The second paragraph indicated a return on the investment based on the utility analysis. The text of the utility analysis condition was the following:

“These costs should be evaluated in the context of the return the company can expect to receive. If the Relapse Prevention (Supervisor Support) intervention which we are proposing does in fact result in an increase in the level of productivity, as compared to previous results from training, more overall productivity will be the measurable result. More productive employees are obviously beneficial since they produce more for the company for the same labour costs as their less productive counterparts. Utility analysis is the process that can be used for estimating the benefit to the company of training employees when training is transferred resulting in a measurable gain in overall productivity.

A utility analysis was conducted based on information gained from supervisors in your company about the value of more productive clerical /administrative employees, the expected increase in productivity, the number of employees trained, and the cost estimates for the Relapse Prevention (Supervisor Support) training program. This analysis indicates that the average clerical/administrative employee, due to increased productivity, will be “worth” \$3000 more to the organization than the average employee trained under the present system. This will be due to the increased

transfer of training resulting in employees performing their jobs more effectively and continuing to improve as new policies and technology are put in place. Since the company expects to train 470 clerical /administrative employees over the course of the year, this saving equals \$1,410,000 ($470 * 3,000$) per year to the company. Furthermore, since these employees will continue to improve and will maintain their productivity over an extended period of time, an estimate can be made of these gains in productivity over time. For example, over a two year period the total benefit for the company is estimated to be \$2,820,000 ($2 * 1,410,000$). In sum, the utility analysis shows that improved transfer of training and productivity that results from the Relapse Prevention (Supervisor Support) intervention has an impressive economic benefit to the company.”

The sum of \$3000 per employee is much lower than the \$7117 used by Carson, et al (1998). It was calculated based on the predicted increase of transfer of 14% found in the Relapse Prevention literature as this was felt to be a more realistic amount of gain for a transfer of training scenario in discussions with Saks and Haccoun. Similarly, the maintenance of the effect of training was felt to be a more questionable issue than the performance of a newly selected employee, with an average 18 year stay with the organization. Therefore, the two year estimate was included instead of the original Latham and Whyte (1994) calculation for 18 years. The four scenarios can be found in appendix 2.

Measures

This study used one primary dependent measure. It was modeled after the Whyte and Latham (1997) 9 item scale which was obtained from the authors. Their 9 item scale is identical to their 8 item scale (Latham and Whyte, 1994) with one additional item. The same 8 item scale was used by Carson, et al (1998). The scale questions were modified where needed to refer to the training scenarios and were designed to measure the extent to which participants accepted the proposal made by the consultant. The nine items of the scale were 1) "How likely are you to implement the consultant's recommendations?", 2) "How confident are you that the consultant's recommendations will significantly improve the productivity of the clerical/administrative personnel?", 3) "How confident are you that the consultant has the ability to improve the training given to the clerical/administrative personnel?", 4) "How confident are you that investing in new training procedures as recommended by the consultant is a good use of company resources?", 5) "How committed are you to implementing the consultant's recommendation?", 6) "In relation to the investment required, how large do you believe the financial return will be if the consultant's recommendations are implemented?", 7) "Will others in the firm approve or disapprove if you decide to implement the consultant's recommendations?", 8) "How effectively could you justify to others in the firm a decision to implement the consultant's recommendations?" and 9) "Rate the quality of the consultant's advice.". The participants responded to the items using a 5-point Likert-type scale specific to each item. A response of "1" in general indicated a preference

to not adopt the consultant's recommendation and a response of "5" indicated a preference to follow the advice. Decision preference scale scores can range from 9 to 45 with the middle point being 27. The internal consistency reliability coefficient (alpha) of the scale is .93. Latham and Whyte (1994) reported a reliability of .93 and Whyte and Latham (1997) also reported .93 for this coefficient. A factor analysis confirmed the unitary structure of the scale.

Additionally, a lined page was added with the following request: "Please discuss your reasons for accepting or rejecting the consultant's recommendations:". This additional request for qualitative information was added in order to understand the participants' reasoning and perceptions of the scenarios. The measure can be found in appendix 1.

The statistical analyses examined the effects of the transfer and information manipulations on the participants' preferences to accept the consultant's recommendation. The overall effects of the manipulation were tested, followed by a pair-wise comparison between means. The effect of gender and experience in finance-accounting, human resources and/or training was also tested.

Results

No significant differences were found between the means for male and female participants. None were found between participants with or without experience in finance or accounting, human resources, and training. Moreover, for participants with experience in more than one of the above, there were no significant differences found. Although not significant, the mean for participants without human resources experience was higher (mean = 28.49) than those with experience (mean = 26.56). This seemed to indicate that participants with human resources experience were more difficult to convince from the consultant's point of view. That is, these participants with human resource experience seem to be less accepting of the scenarios overall although not significantly less. No interaction effect was found between transfer type, information type and human resource experience.

The means and standard deviations for the sum of responses to the four decision preference scale items are presented in Table 1 for the 2 X 2 (Transfer X Information) design. Decision preference scale scores can range from 9 - 45, with a higher number indicating a stronger preference to accept the consultant's recommendations. Although the means for the utility analysis condition for each of the transfer conditions are lower than the corresponding means for the research information condition, there was no statistically significant difference. Correspondingly, the means for the Supervisor Support condition for each of the

two information conditions is higher than the corresponding means for the Relapse Prevention condition. Again these results were not statistically significant.

Table 1

Means, standard deviations and number of subjects (N)

Transfer type	Information type	Mean	Std. Dev.	N
Relapse Prevention	Research Information	27.4167	8.3840	42
Relapse Prevention	Utility Analysis	26.2571	7.8454	35
Supervisor Support	Research Information	29.0278	6.7124	36
Supervisor Support	Utility Analysis	27.6286	7.8481	35

A univariate ANOVA was conducted for a 2 X 2 (transfer x information) between-subjects design on participants' responses to the decision preference scale. As stated above, the results indicated that there was no main effect that was statistically significant nor was there an interaction effect. The results are reproduced in Table 2.

Table 2

Tests of Between-Subjects Effects

Source	Type IV Sum of Squares	Df	Mean Squared	F	Sig.
Corrected Model	137.907	3	45.969	.766	.515
Intercept	111953	1	111953	1864.6	.000
Transfer type	81.813	1	81.813	1.363	.245
Information type	60.214	1	60.214	1.003	.318
Transfer * Infotype	.528	1	.528	.009	.925
Error	8645.788	144	60.040		
Total	121397	148			
Corrected total	8783.69	147			

The results of the main comparisons of transfer type (Relapse prevention vs. Supervisor support) and information type (Research information vs. Utility analysis information) are reproduced in Table 3 and Table 4 respectively.

Whyte and Latham (1997) analyzed the responses to each of the nine scale items and found that they were consistently lower for the utility analysis condition. The differences were greatest and were statistically significant for items 5-(How committed are you to implementing the consultant's decision?), 8-(How effectively could you justify to others in the firm a decision to implement the consultant's recommendations?), and 9-(How important in your decision making was the estimate of the financial consequences of the consultant's recommendations?). These were reported to be significant at the following levels: $p < .03$, $p < .02$ and $p < .01$ respectively.

In analyzing the results of Table 3, the overall results indicate that the means for the supervisor support transfer program were higher overall and higher for each item of the scale. None of the results were significant. However, the mean difference was greatest for item 5-(How committed are you to implementing the consultant's recommendation?), $p = .211$.

Table 3

Transfer type:

- means, standard deviation, number of respondents(N), and significance

	Relapse Prevention				Supervisor Support			
	Mean	S.Dev.	N	Sig.	Mean	S.Dev.	N	Sig.
Scale	26.8896	8.1113	77	.256	28.3380	7.2761	71	.256
Question 1	3.2658	1.1176	79	.707	3.3289	.9576	76	.707
Question 2	2.6709	.9299	79	.342	2.8158	.9621	76	.342
Question 3	2.9367	.9915	79	.692	3.0000	.9870	76	.692
Question 4	3.0380	1.1596	79	.356	3.2000	1.0000	75	.356
Question 5	2.9367	1.2944	79	.211	3.1974	1.2860	76	.211
Question 6	2.8974	1.0394	78	.348	3.0548	1.0123	73	.348
Question 7	3.0649	1.2176	77	.292	3.2568	.9940	74	.292
Question 8	3.0759	1.2483	79	.231	3.3067	1.1267	75	.231
Question 9	2.8291	.9802	79	.842	2.8600	.9428	75	.842

In analyzing the results of Table 4, the overall results indicate that means for the research information condition were higher overall and higher in 7 out of 9 items in the scale. The result for the full scale was not significant. However, item 3- (“How confident are you that the consultant has the ability to improve the training given to the clerical/administrative personnel?”) was significant at $p < .01$ (.006) indicating a clear preference for research information as opposed to utility analysis estimates. Item 2- (“How confident are you that the consultant’s recommendations will significantly improve the productivity of the clerical/administrative personnel?”) although not significant had a $p = .166$ and item 7- (“Will others in the firm approve or disapprove if you decide to implement the consultant’s recommendations?”) had a $p = .182$. These items seem

to indicate a higher level of questioning of the credibility of the consultant when the argument made for a program included the utility analysis estimate.

Table 4

Information type:

- means, standard deviation, number of respondents(N), and significance

	Research Information				Utility Analysis Information			
	Mean	S.Dev.	N	Sig.	Mean	S.Dev.	N	Sig.
Scale	28.1603	7.6526	78	.341	26.9429	7.8202	70	.341
Question 1	3.3171	1.0527	82	.798	3.2740	1.0309	73	.798
Question 2	2.8415	.9746	82	.166	2.6301	.9053	73	.166
Question 3	3.1707	.9136	82	.006	2.7397	1.0278	73	.006
Question 4	3.1728	1.1157	81	.502	3.0548	1.0526	73	.502
Question 5	3.0488	1.2363	82	.873	3.0822	1.3617	73	.873
Question 6	3.0000	1.0434	80	.738	2.9437	1.0126	71	.738
Question 7	3.2716	1.1608	81	.182	3.0286	1.1668	70	.182
Question 8	3.1707	1.1843	82	.846	3.2083	1.2096	72	.846
Question 9	2.8902	1.0215	82	.526	2.7917	.8871	72	.526

Discussion

The Latham and Whyte (1994) effect was not replicated in terms of this study related to a training scenario. Neither hypothesis was proven with statistical significance. However, the acceptance of the utility scenarios was slightly lower in comparison to the research information. Upon closer examination of each mean, this difference is very slight when we consider the results from the 2X2 analysis in table 1. The mean for relapse prevention - research information is 27.4167 (s.d. 8.3840) and for supervisor support - utility analysis it is 27.6286 (s.d. 7.8481). When examining table 4, the results show a preference for research information, mean of 28.1603 (s.d. 7.6526), over utility analysis, mean of 26.9429 (s.d. 7.8202). However, the formulation of the information about utility analysis did not detract from participants being able to receive the information and consider it in a similar manner that research information was received, since this difference in results is not significant.

The mean from table 3 for Supervisor Support, 28.3380 (s.d. 7.2761), was slightly higher than Relapse Prevention, 26.8896 (s.d. 8.1113) and this effect, although not statistically significant, is in the opposite direction from the proposed hypothesis. Managers providing support to employees, in order that they may be able to apply their training, was found to be as likely by participants as an intervention centered on the employee (relapse prevention). The participants with human resource experience, regarding this comparison, had a

comparable mean with the respondents that did not have this experience. This indicates that the issue of supervisor support for training seemed favourable in a more generalized manner.

Perhaps this result can be explained by looking at the comments that were made on the attached request for justification. In tabulating the type of comment made on these attachments, the comments were grouped into categories and if more than one comment was clearly delineated from the same participant, they were entered as separate comments. 121 (78%) participants made comments.

The highest number of comments were made regarding participants not having enough information provided by the scenario to make a good decision and these comments were fairly evenly distributed with between 6 to 9 comments for each scenario, for a total of 28. There may be an advantage to interviewing candidates or being available to provide further information or clarification about the scenarios presented in such a study. Only 1 comment for each scenario indicated that the participant had not understood the information well enough to respond with accuracy.

Many comments indicated that consultants, in general, are not readily given credibility despite the scenario clearly indicating the consultant's education level and experience as well as research experience in the specific area discussed. 33 comments challenged the credibility of the consultant, 22 of these were

associated with the utility analysis scenarios. It would seem from the comments that the more complex the information justifying the proposed scenario, the more the comments reflected concern about needing some indication of the consultant's track record. These comments seem to reflect that participants believe that past performance predicts future performance more than they believe in the complexity of what some referred to as theoretical proposals. The fact that transfer of training interventions are fairly new as concepts and not as yet widespread may account for this reaction in terms of the research - transfer scenarios. The utility analysis scenarios received these low credibility comments, in part, regarding the large amount of return that had been indicated in the scenarios.

Some participants commented in the opposite direction of the scenario received in that a) 6 wanted calculations for return on investment but had received a research information scenario, b) 3 commented that they were not in agreement with training managers but had received a proposal for training managers, c) 1 commented that managers should be trained to support trainees but had received a relapse prevention scenario. As a preliminary step it may be useful for consultants and human resource managers to provide a choice of the preferred interventions to both management and employees before suggesting which type of intervention should be considered for implementation in a specific organization addressing a specific problem.

The comments made about advantages outweighing costs were remarkably low considering the scenario information. Only 9 of these positive comments were made for utility scenarios and 6 were made for the research information scenarios. This may reflect the low level of belief in the possibility of success for the scenario proposed. Moreover, 9 respondents indicated that they wanted to test the proposal first, before implementation and 8 of these were comments made under the relapse prevention options. It appears from the comments that a better description of relapse prevention was necessary and that respondents, in part, did not like the implications made in the terminology of the name.

On a positive note, 14 respondents commented that the consultant made sense in the proposal, 10 of these responses were under the research information scenarios and only 4 were under utility analysis. This result, and the fact that 6 clearly indicated that they did not have confidence in the level of predicted returns under the utility analysis condition, may indicate that managers want substantial information about the person proposing a program. They seem to need more before they are willing to accept a proposal backed by a certain complexity of argument such as utility analysis estimates.

Future research could, therefore, focus on identifying the best way to educate managers about the models that describe these new innovations. For example, it may be that certain types of managers (i.e. engineering) have a preference for flow diagrams explaining the learning to transfer relationships

others may prefer using tools that are common in project management such as risk analysis diagrams and language.

Future research should also look into the area of issue selling as it relates to information about human resource issues and more specifically transfer interventions. Qualitative data gathering also seems to be indicated as a good means to assess some of the thinking patterns. In this study which empirically was not successful at finding a statistical indication of relationships, the qualitative information provided some indication of the overall issues that were part of the managers' perceptions of the scenarios.

Additionally, future research may first need to focus on examining the issue of environmental interventions since this study demonstrated that this type of intervention was as acceptable, and in part slightly preferred, as the individual intervention. In reality, however, environmental interventions, such as Supervisor Support training, do not seem to be widespread. The combination of both types of transfer interventions may have an additive effect and this could certainly be a selling point for this type of environmental intervention. Future research could maximize the overall statistical significance by studying the same training program in two very similar sites using one as an initial control group while applying the two transfer interventions in the other. This type of control minimizes the dependency on other tools for calculating overall results such as utility analysis estimations and subjective estimations of productivity increase.

More research continues to be necessary in order to define better ways of measuring the resulting dependent variable (output).

With the many changes brought on by technology, the scenarios used were somewhat dated in the sense that many clerical positions have been replaced by data gathering and processing technology. For many positions, productivity must now be viewed from many angles such as the soft skills necessary in communication and teamwork, the technological ability for understanding complex global interaction and the broader vision of accepting continuous change and improvement. These may also be fruitful areas that new research needs to explore in terms of maximizing returns from training through the use of transfer interventions.

Contribution to transfer of training research

This study has specifically sought out information about the acceptability of two specific types of transfer interventions, Relapse Prevention and Supervisor Support training. The review of the literature indicated less acceptability for environmental interventions such as supervisor training. The results of this study clearly indicate that managers do not reject this type of intervention and even slightly preferred the scenarios that included supervisor support, although not at a significantly higher degree. This study seems to indicate that information about research results continue to be the preferred justification required by managers to sell them on the use of these interventions. Relapse prevention interventions

received acceptance from participants overall, however, it seems that some rejection was simply due to the language used to describe the program. The literature mentions that issue selling success involves the acceptance of the language used and there seems to be a slight effect related to this in respect to relapse prevention intervention proposals. This point needs further research in order to be empirically justified.

Contribution to utility analysis research

The results of this study did not replicate the rejection of utility analysis estimates found by Latham and Whyte (1994) and Whyte and Latham (1997) in their studies of this type of information used to justify selection programs. Although utility analysis estimates were not as preferred as research information that was of a less complicated nature, this study did not find a significant difference between the two conditions when used to justify transfer of training interventions. The fact that the utility analysis descriptions were simplified and reduced in length seemed to allow managers to focus more on the bottom line aspects of the calculations in terms of a return on investments. This simplification may be preferred by some managers. However, empirically, more research will need to be done to look into the use of such information by managers in their decision making about human resource development programs.

Practical implications

Consultants and human resource development managers may benefit from some of the findings of this study. Firstly, it is clear that a credibility issue arises when the complexity of the language used in a proposal is reacted to negatively by the receivers of the message. This fact should be taken into account in terms of the language used to describe programs. Moreover, some participants described Relapse Prevention as some fad being sold by the consultant and this clearly indicates that managers are reticent in dealing with a consultant's recommendations. It may be more cautious and practical to introduce innovations through the use of pilot projects. Some of the suggestions made by participants mirrored the research found on this subject (Brinkerhoff and Montesino, 1995) that indicated a more positive perception of the forces that encourage transfer of training in the work environment after managers began to use interventions in support of employees through a pilot study. The scenarios did not receive a very high score overall and this indicates that some education about training issues may be required. Since most decisions need to be supported by top management, this study seems to indicate that concise and to the point communication about training issues need to be part of all presentations about transfer programs. Practical examples may be advisable to elaborate on crucial issues in the transfer process and especially on work environment links to transfer.

In terms of utility analysis, such estimations are not receiving an immediate positive response and seem to need to be introduced after a relationship has been established with managers. There seemed to be a negative effect on the credibility of the consultant who presented such estimates. When a client requests information about estimates of dollar returns regarding a human resource program, utility analysis as a tool to be used to calculate such estimates, may then be introduced with less skepticism on the part of the receiver. Managers seem to indicate a need to have this type of information, however, when presented with the calculations they seem to have a reduction in acceptance of the proposal and the consultant in the study.

Another practical implication concerns the organizational context of the intervention. The results seem to indicate that the more time the consultant spends getting information about specific needs from trainees and managers, the higher the acceptance level for the intervention within the organization. Participants who commented on a greater need for training and training interventions described positive experiences in their organizations and scored a higher acceptance of the proposals. Although this result was not an empirical finding, this point was made by several participants and has some practical value.

Conclusion

This study had a population of respondents whose demographics were very similar to the previous studies carried out by Latham and Whyte (1994) and Carson, et al (1998). In that respect, this study contributes to the literature on responses to utility analysis as an estimation tool for human resources management programs. There continues to be an unknown reason for the disparate results obtained in comparison to the Latham and Whyte (1994) study as well as the result of the Whyte and Latham (1997) study. Carson, et al, (1998) suggested that American managers may be different from their Canadian counterparts. This difference now seems more unlikely. It seems more likely that presenting the information in a less complex fashion was responsible for the similarity between levels of acceptability of the utility analysis information. It bears mentioning, however, that the participants involved in applying scenarios were not making real decisions and limits generalizing the results to immediate applications in the field. Moreover, the means for all the scenarios were between 26 and 29 on a 9 - 45 scale having a midpoint of 27. This result is not unlike the results obtained in the aforementioned studies and continues to demonstrate, as mentioned by Carson, et al (1998), that managers on average were not highly favourable to the proposals made by the consultants. Despite the fact that the results overall were slightly above the mid-point, there continues to be a reticence in adopting refinements proposed by human resource departments, as in this study concerning transfer of training interventions and utility analysis.

REFERENCES

- Alexander, R.A. and Barrick, M.R. (1987). "Estimating the standard error of projected dollar gains in utility analysis". Journal of Applied Psychology, 72 (3), 475-479.
- Baldwin, T. T. and Ford, J. K. (1988). "Transfer of training: A review and direction for future research" Personnel Psychology 41, 63-105.
- Baldwin, T.T. and Magjuka, R. J. (1991) "Organizational training and signals of importance: Linking pretraining perceptions to intentions to transfer. Human Resource Development Quarterly, 2, 25-36.
- Bamberger, P. and Fiegenbaum, A. (1996). "The role of strategic reference points in explaining the nature and consequences of human resource strategy". Academy of Management Review 21(4), 926-958.
- Becker, B.E. and Huselid, M.A. (1992). "Direct estimates of SDy and the implications for utility analysis". Journal of Applied Psychology, 77 (3), 227-233.
- Beckstein, B.A. and Gilliland, S.W. (1996) "The applicability of utility analysis: When do utility estimates influence decisions?" Paper presented at the 11th annual conference of the Society for Industrial and Organizational Psychology, San Diego, CA.

- Belcourt, M. and Wright, P.C. (1996). Managing performance through training and development. Toronto: Nelson Canada.
- Boudreau, J.W. (1983). "Economic considerations in estimating the utility of human resource productivity improvement programs" Personnel Psychology, 36, 551-576.
- Boudreau, J.W. (1984). "Decision theory contributions to HRM research and practice". Industrial Relations, 23, 198-217.
- Boudreau, J.W. and Smith, C. (1993). "The effects of utility analysis information on managerial training decisions: A comparison between students and managers". Paper presented at the 8th annual meeting of the Society for Industrial /Organizational Psychology. San Francisco, CA.
- Brinkerhoff, R.O. and Montesino, M.U. (1995). "Partnerships for training: Lessons from a corporate study." Human Resource Development Quarterly, 6 (3), 263-274
- Carr, A.F. (1988) "Utility Analysis and human resource management". Public Productivity Review, XII (2), 131-147.
- Carson, K.P., Becker, J.S. and Henderson, J.A. (1998). "Is utility really futile? A failure to replicate and an extension". Journal of Applied Psychology 83 (1), 84-96.

- Casio, W.F. (1980). "Responding to the demand for accountability: A critical analysis of three utility models". Organizational Behaviour and Human Performance, 25, 32-45.
- Casio, W.F. (1991). Costing Human Resources: The Financial Impact of Behavior in Organizations 3rd edition, Boston: PWS-Kent.
- Casio, W.F. and Ramos, R.A. (1986). "Development and application of a new method for assessing job performance in behavioral/economic terms". Journal of Applied Psychology, 71 (1), 20-28.
- Cohen, D. J. (1990). "The pretraining Environment: A conceptualization of how contextual factors influence participant motivation". Human Resource Development Quarterly, 1 (4), 387-398.
- Cronshaw, S.F. (1997). "Lo! The stimulus speaks: The insider's view on Whyte and Latham's "The Futility of Utility Analysis". Personnel Psychology, 50, 611-615.
- Cronshaw, S.F. and Alexander, R.A. (1985). "One answer to the demand for accountability: Selection utility as an investment decision". Organizational Behaviour and Human Decision Processes, 35, 102-118.

- Dutton, J.E. and Ashford, S.J. (1993). "Selling Issues to Top Management". Academy of Management Review, 18 (3), 397-428.
- Georgensen, D. (1982). "The problem of transfer calls for partnership". Training and Development Journal, 36, 75-78.
- Haccoun, R.R., Labrèche, I and Saks, A.M. (1997). "The relative success of various transfer enhancement procedures (T.E.P.s): A meta-analysis". European Work and Organizational Psychology, Verona, Italy.
- Haccoun, Robert R. and Saks, Alan M. (1998). "Training in the 21st Century: Some lessons from the last one". Canadian Psychology/Psychologie canadienne, 34 (1-2), 33-51.
- Hazer, J.T. and Highhouse S. (1997). "Factors influencing managers' reactions to utility analysis: Effects of SDy method, information frame , and focal intervention". Journal of Applied Psychology, 82 (1), 104-112.
- Johns, G. (1993). "Constraints on the adoption of psychology-based personnel practices: Lessons from organizational innovation". Personnel Psychology, 46, 569-592.
- Labib, Nadia and Applebaum, Steven H. (1994). "The impact of downsizing practices on corporate success". Journal of Management Development, 13 (7), 59-84.

- Landy, F.J., Farr, J.L. and Jacobs, R.R. (1982). "Utility concepts in performance measurement". Organizational Performance and Human Performance, 30, 15-40.
- Latham, G.P. and Whyte, G. (1994). "The futility of utility analysis". Personnel Psychology, 47, 31-46.
- Macan, T.H. and Highhouse, S.H. (1994). "Communicating the utility of human resource activities: A survey of I/O and HR professionals". Journal of Business and Psychology, 8, 425-436.
- Marlatt, G.A. and Gordon, J.R. (1980). "Determinants of relapse: Implications for the maintenance of behaviour change". In Davidson, P.O. and Davidson, S.M. (Eds.), Behavioural Medicine: Changes in health and life styles, New York: Brunner/Mazel, 410-452.
- Marx, R.D. (1983). "Relapse prevention for managerial training: A model for maintenance of behaviour change". Academy of Management Review, 7 (3), 433-441.
- McKenna, G.F. (1990). Take the "A" training". Industry Week, 39, 22-29.
- Pfeffer, Jeffrey (1995) "Producing sustainable competitive advantage through the effective management of people". Academy of Management Executive, 9 (1), 55-69.

Raju, N.S., Burke, M.J. and Normand, J. (1990). "A new approach for utility analysis".

Journal of Applied Psychology, 75 (1), 3-12.

Saari, L.M., Johnson, T.R., McLaughlin, S.D. and Zimmerle, D.M. (1988) "A survey of management training and education practices in U.S. companies". Personnel

Psychology, 41, 731-743.

Saks, A.M. and Belcourt, M. (1997). "Transfer of training in Canadian organizations".

Update 1 (1), 9-10.

Schmidt, F.L., Hunter, J.E., McKenzie, R.C. and Muldrow, T.W. (1979). "Impact of valid selection procedures on work-force productivity". Journal of Applied Psychology,

64 (6), 609-626.

Schmidt, F.L., Hunter, J.E., and Pearlman, K. (1982). "Assessing the economic impact of personnel programs on workforce productivity". Personnel Psychology, 35, 333-

347.

Steffy, B.D. and Maurer, S.D. (1988). "Conceptualizing and measuring the economic

effectiveness of human resource activities". Academy of Management Review, 13

(2), 271-286.

Tannenbaum, S.I. and Yukl, G. (1992). "Training and development in work organizations"
Annual Review of Psychology, 43, 399-441.

Whyte, G. and Latham, G. (1997). "The futility of utility analysis revisited: When even an
expert fails". Personnel Psychology, 50, 601-610.

Xiao, Jin (1996). "The relationship between organizational factors and the transfer of
training in the electronics industry in Shenzhen, China." Human Resource
Development Quarterly, 7 (1), 55-73.

Appendix 1

Instructions

This questionnaire is part of a study about human resource management decision making. In the following pages you will read a brief scenario, and you will be asked to respond thoughtfully to some questions that are based on the scenario. The scenario describes a situation in which a management decision must be made, and you are the one who has to make it.

We are interested in learning about your true reactions to the scenario you are about to read. This is not a test. None of the potential responses to the following questions are more correct than others. You are simply asked to imagine that the situation described is real, to consider the questions carefully, and to indicate your responses in the space provided.

To ensure the anonymity of your responses, please do not sign this questionnaire. It would be useful for data analysis, however, if you would provide the following information:

Sex: Female _____ Male _____

Age: _____

Number of years of full-time work experience: _____

Do you have job experience in finance or accounting?

Yes _____ No _____

Do you have job experience in human resource management?

Yes _____ No _____

Do you have job experience in training and development?

Yes _____ No _____

QUESTIONS

Please answer the following questions by circling the appropriate response.

1. How likely are you to implement the consultant's recommendations?

1	2	3	4	5
very unlikely	unlikely	even chance	likely	very likely

2. How confident are you that the consultant's recommendations will significantly improve the productivity of the clerical /administrative personnel?

1	2	3	4	5
not at all confident	somewhat confident	moderately confident	quite confident	very confident

3. How confident are you that the consultant has the ability to improve the training given to the clerical /administrative personnel?

1	2	3	4	5
not at all confident	somewhat confident	moderately confident	quite confident	very confident

4. How confident are you that investing in new training procedures as recommended by the consultant is a good use of company resources?

1	2	3	4	5
not at all confident	somewhat confident	moderately confident	quite confident	very confident

5. How committed are you to implementing the consultant's recommendations?

1	2	3	4	5
not at all committed	somewhat committed	moderately committed	quite committed	very committed

Please turn the page

6. In relation to the investment required, how large do you believe the financial return will be if the consultant's recommendations are implemented?

1	2	3	4	5
negligible	small	moderate	large	very large

7. Will others in the firm approve or disapprove if you decide to implement the consultant's recommendations?

1	2	3	4	5
disapprove	moderately disapprove	neither approve nor disapprove	moderately approve	approve

8. How effectively could you justify to others in the firm a decision to implement the consultant's recommendations?

1	2	3	4	5
not at all effectively	somewhat effectively	moderately effectively	quite effectively	very effectively

9. Rate the quality of the consultant's advice.

1	2	3	4	5
poor	fair	good	very good	excellent

Please turn page

Appendix 2

Imagine that you are the vice-president of human resources in a large Canadian multinational corporation. This corporation employs over 10,000 people and had sales of over \$4 billion dollars last year. The corporation has a reputation for high quality products. Recently concerns have been raised about the productivity of clerical /administrative personnel.

An assessment of training needs has been conducted to address some of these productivity concerns and training courses have been designed to meet the needs. Unfortunately, the training does not seem to be making much of a difference in the productivity of the clerical /administrative personnel. Although you are skeptical that the methods by which your firm trains such personnel can be improved upon, an organizational consultant has been retained to investigate the issue.

This consultant specializes in the development and implementation of transfer of training interventions that enable companies to increase the rate of transfer of training. Transfer of training is the extent to which trainees apply the knowledge, skills, and abilities acquired in training on-the-job. The consultant is also a member of both the Canadian and American Psychological Associations, and graduated ten years ago with a Ph.D. from a prestigious university.

This particular consultant has done research showing that the transfer of training can be increased through the use of transfer of training interventions, and has expertise in the design and development of programs for increasing the effectiveness of training. After a discussion of the issues with management personnel, the consultant submits a preliminary proposal. This is a summary of the proposal:

Training programs have traditionally had low levels of transfer of training. In other words, there tends to be relatively little change in trainees' behaviour or job performance following training. In fact, it has been estimated that only 10 percent of the investments made in training result in a change in trainees' behaviour on-the-job. The major reason for the lack of transfer of training is due to obstacles and barriers in the work environment that make it difficult for trainees to apply and use the material acquired in training on-the-job. Transfer of training interventions that are designed to address the obstacles and barriers in the work environment can improve the transfer of training following a training program.

For your company, a study consisting of the following steps will be performed:

1. A transfer of training audit will be conducted in order to identify the extent of the transfer of training problem in your organization;
2. A transfer of training needs assessment will be conducted in order to identify the major barriers and obstacles preventing the transfer of training of the clerical /administrative personnel;
3. The results of the transfer of training audit and needs assessment will be used to develop a transfer of training intervention. This will involve the development of a training program for trainees' managers called "Supervisor Support". One of the most significant obstacles to the transfer of training is the lack of support from managers. Managers hold one of the most significant keys to resolving the problem of transfer of training. Support from the trainee's manager can greatly strengthen the likelihood that trainees will apply the training material on the job. The Supervisor Support training will inform managers of the barriers to transfer of training in the organization, and what they can do to improve the transfer of training of the clerical/ administrative personnel. This will include factors such as goal-setting activities, how and when to provide encouragement and support, reinforcement activities, and modeling of behaviours. For example, supervisors will be trained to discuss the content and benefits of the training

program and to set goals with employees prior to and subsequent to the training.

The cost of designing and implementing the transfer of training intervention will be \$20,000. Because you expect to train about 470 clerical /administrative employees and their supervisors this year, we estimated that the total implementation cost of the training program will be \$425,000. This amount reflects training costs, training personnel salaries, and required equipment, facilities and supplies. Total outlay for the training program (\$425,000) plus the consultant's recommendations (\$20,000) if followed, is therefore approximately \$445,000.

Research published on the transfer of training has found that transfer of training interventions can improve the transfer of training. Supervisor support and encouragement has been shown to have a significant effect on the transfer of training and the effectiveness of training programs. Therefore, Supervisor Support training is expected to improve the transfer of training and productivity of the clerical /administrative personnel.

As the vice-president of the company, it is up to you to decide whether to implement the consultant's recommendations.

Imagine that you are the vice-president of human resources in a large Canadian multinational corporation. This corporation employs over 10,000 people and had sales of over \$4 billion dollars last year. The corporation has a reputation for high quality products. Recently concerns have been raised about the productivity of clerical /administrative personnel.

An assessment of training needs has been conducted to address some of these productivity concerns and training courses have been designed to meet the needs. Unfortunately, the training does not seem to be making much of a difference in the productivity of the clerical /administrative personnel. Although you are skeptical that the methods by which your firm trains such personnel can be improved upon, an organizational consultant has been retained to investigate the issue.

This consultant specializes in the development and implementation of transfer of training interventions that enable companies to increase the rate of transfer of training. Transfer of training is the extent to which trainees apply the knowledge, skills, and abilities acquired in training on-the-job. The consultant is also a member of both the Canadian and American Psychological Associations, and graduated ten years ago with a Ph.D. from a prestigious university.

This particular consultant has done research showing that the transfer of training can be increased through the use of transfer of training interventions, and has expertise in the design and development of programs for increasing the effectiveness of training. After a discussion of the issues with management personnel, the consultant submits a preliminary proposal. This is a summary of the proposal:

Training programs have traditionally had low levels of transfer of training. In other words, there tends to be relatively little change in trainees' behaviour or job performance following training. In fact, it has been estimated that only 10 percent of the investments made in training result in a change in trainees' behaviour on-the-job. The major reason for the lack of transfer of training is due to obstacles and barriers in the work environment that make it difficult for trainees to apply and use the material acquired in training on-the-job. Transfer of training interventions that are designed to address the obstacles and barriers in the work environment can improve the transfer of training following a training program.

For your company, a study consisting of the following steps will be performed:

1. A transfer of training audit will be conducted in order to identify the extent of the transfer of training problem in your organization;
2. A transfer of training needs assessment will be conducted in order to identify the major barriers and obstacles preventing the transfer of training of the clerical /administrative personnel;
3. The results of the transfer of training audit and needs assessment will be used to develop a transfer of training intervention. This will involve the development of a training program for trainees' managers called "Supervisor Support". One of the most significant obstacles to the transfer of training is the lack of support from managers. Managers hold one of the most significant keys to resolving the problem of transfer of training. Support from the trainee's manager can greatly strengthen the likelihood that trainees will apply the training material on the job. The Supervisor Support training will inform managers of the barriers to transfer of training in the organization, and what they can do to improve the transfer of training of the clerical/administrative personnel. This will include factors such as goal-setting activities, how and when to provide encouragement and support, reinforcement activities, and modeling of behaviours. For example, supervisors will be trained to discuss the content and benefits of the training

program and to set goals with employees prior to and subsequent to the training.

The cost of designing and implementing the transfer of training intervention will be \$20,000. Because you expect to train about 470 clerical /administrative employees and their supervisors this year, we estimated that the total implementation cost of the training program will be \$425,000. This amount reflects training costs, training personnel salaries, and required equipment, facilities and supplies. Total outlay for the training program (\$425,000) plus the consultant's recommendations (\$20,000) if followed, is therefore approximately \$445,000.

These costs should be evaluated in the context of the return the company can expect to receive. If the management training in Supervisor Support which we are proposing does in fact result in an increase in the level of productivity, as compared to previous results from training, more overall productivity will be the measurable result. More productive employees are obviously beneficial since they produce more for the company for the same labour costs as their less productive counterparts. Utility analysis is the process that can be used for estimating the benefit to the company of training employees when training is transferred resulting in a measurable gain in overall productivity.

A utility analysis was conducted based on information gained from supervisors in your company about the value of more productive clerical /administrative employees, the expected increase in productivity, the number of employees trained, and the cost estimates for the additional management training program. This analysis indicates that the average clerical/administrative employee, due to increased productivity, will be "worth" \$3000 more to the organization than the average employee trained under the present system. This will be due to the increased transfer of training resulting in employees performing their jobs more effectively and continuing to improve as new policies and technology are put in place. Since the company expects to train 470 clerical /administrative employees over the course of the year, this saving equals \$1,410,000 ($470 * 3,000$) per year to the company. Furthermore, since these employees will continue to improve and will maintain their productivity over an extended period of time, an estimate can be made of these gains in productivity over time. For example, over a two year period the total benefit for the company is estimated to be \$2,820,000 ($2 * 1,410,000$). In sum, the utility analysis shows that improved transfer of training and productivity that results from training managers in Supervisory Support has an impressive economic benefit to the company.

As the vice-president of the company, it is up to you to decide whether to implement the consultant's recommendations.

Imagine that you are the vice-president of human resources in a large Canadian multinational corporation. This corporation employs over 10,000 people and had sales of over \$4 billion dollars last year. The corporation has a reputation for high quality products. Recently concerns have been raised about the productivity of clerical /administrative personnel.

An assessment of training needs has been conducted to address some of these productivity concerns and training courses have been designed to meet the needs. Unfortunately, the training does not seem to be making much of a difference in the productivity of the clerical /administrative personnel. Although you are skeptical that the methods by which your firm trains such personnel can be improved upon, an organizational consultant has been retained to investigate the issue.

This consultant specializes in the development and implementation of transfer of training interventions that enable companies to increase the rate of transfer of training. Transfer of training is the extent to which trainees apply the knowledge, skills, and abilities acquired in training on-the-job. The consultant is also a member of both the Canadian and American Psychological Associations, and graduated ten years ago with a Ph.D. from a prestigious university.

This particular consultant has done research showing that the transfer of training can be increased through the use of transfer of training interventions, and has expertise in the design and development of programs for increasing the effectiveness of training. After a discussion of the issues with management personnel, the consultant submits a preliminary proposal. This is a summary of the proposal:

Training programs have traditionally had low levels of transfer of training. In other words, there tends to be relatively little change in trainees' behaviour or job performance following training. In fact, it has been estimated that only 10 percent of the investments made in training result in a change in trainees' behaviour on-the-job. The major reason for the lack of transfer of training is due to obstacles and barriers in the work environment that make it difficult for trainees to apply and use the material acquired in training on-the-job. Transfer of training interventions that are designed to address the obstacles and barriers in the work environment can improve the transfer of training following a training program.

For your company, a study consisting of the following steps will be performed:

1. A transfer of training audit will be conducted in order to identify the extent of the transfer of training problem in your organization;
2. A transfer of training needs assessment will be conducted in order to identify the major barriers and obstacles preventing the transfer of training of the clerical /administrative personnel;
3. The results of the transfer of training audit and needs assessment will be used to develop a transfer of training intervention. This will involve the development of a training program for trainees' called "Relapse Prevention". One of the most significant obstacles to the transfer of training is trainees' inability to cope with the barriers in the work environment. Trainees' ability to anticipate and cope with the work environment is one of the most significant keys to resolving the problem of transfer of training. Preparing trainees for relapses can greatly strengthen the likelihood that they will apply the training material on the job. The Relapse Prevention training will inform trainees of the barriers to transfer of training in the organization, and what they can do to cope with them when they are encountered in order to continue to apply the training material. This will include factors such as identifying transfer obstacles, anticipating transfer obstacles, reasons for relapses, and developing strategies and coping mechanisms for dealing with

transfer obstacles and relapses. For example, trainees will be trained on the difficulties of applying training material in their work environment, how to anticipate barriers, and how to prepare for barriers and relapses prior to and subsequent to the training.

The cost of designing and implementing the transfer of training intervention will be \$20,000. Because you expect to train about 470 clerical /administrative employees this year, we estimated that the total implementation cost of the training program will be \$425,000. This amount reflects training costs, training personnel salaries, and required equipment, facilities and supplies. Total outlay for the training program (\$425,000) plus the consultant's recommendations (\$20,000) if followed, is therefore approximately \$445,000.

Research published on the transfer of training has found that transfer of training interventions can improve the transfer of training. Relapse Prevention interventions have been shown to have a significant effect on the transfer of training and the effectiveness of training programs. Therefore, Relapse Prevention training is expected to improve the transfer of training and productivity of the clerical /administrative personnel.

As the vice-president of the company, it is up to you to decide whether to implement the consultant's recommendations.

Imagine that you are the vice-president of human resources in a large Canadian multinational corporation. This corporation employs over 10,000 people and had sales of over \$4 billion dollars last year. The corporation has a reputation for high quality products. Recently concerns have been raised about the productivity of clerical /administrative personnel.

An assessment of training needs has been conducted to address some of these productivity concerns and training courses have been designed to meet the needs. Unfortunately, the training does not seem to be making much of a difference in the productivity of the clerical /administrative personnel. Although you are skeptical that the methods by which your firm trains such personnel can be improved upon, an organizational consultant has been retained to investigate the issue.

This consultant specializes in the development and implementation of transfer of training interventions that enable companies to increase the rate of transfer of training. Transfer of training is the extent to which trainees apply the knowledge, skills, and abilities acquired in training on-the-job. The consultant is also a member of both the Canadian and American Psychological Associations, and graduated ten years ago with a Ph.D. from a prestigious university.

This particular consultant has done research showing that the transfer of training can be increased through the use of transfer of training interventions, and has expertise in the design and development of programs for increasing the effectiveness of training. After a discussion of the issues with management personnel, the consultant submits a preliminary proposal. This is a summary of the proposal:

Training programs have traditionally had low levels of transfer of training. In other words, there tends to be relatively little change in trainees' behaviour or job performance following training. In fact, it has been estimated that only 10 percent of the investments made in training result in a change in trainees' behaviour on-the-job. The major reason for the lack of transfer of training is due to obstacles and barriers in the work environment that make it difficult for trainees to apply and use the material acquired in training on-the-job. Transfer of training interventions that are designed to address the obstacles and barriers in the work environment can improve the transfer of training following a training program.

For your company, a study consisting of the following steps will be performed:

1. A transfer of training audit will be conducted in order to identify the extent of the transfer of training problem in your organization;
2. A transfer of training needs assessment will be conducted in order to identify the major barriers and obstacles preventing the transfer of training of the clerical /administrative personnel;
3. The results of the transfer of training audit and needs assessment will be used to develop a transfer of training intervention. This will involve the development of a training program for trainees' called "Relapse Prevention". One of the most significant obstacles to the transfer of training is trainees' inability to cope with the barriers in the work environment. Trainees' ability to anticipate and cope with the work environment is one of the most significant keys to resolving the problem of transfer of training. Preparing trainees for relapses can greatly strengthen the likelihood that they will apply the training material on the job. The Relapse Prevention training will inform trainees of the barriers to transfer of training in the organization, and what they can do to cope with them when they are encountered in order to continue to apply the training material. This will include factors such as identifying transfer obstacles, anticipating transfer obstacles, reasons for relapses, and developing strategies and coping mechanisms for dealing with

transfer obstacles and relapses. For example, trainees will be trained on the difficulties of applying training material in their work environment, how to anticipate barriers, and how to prepare for barriers and relapses prior to and subsequent to the training.

The cost of designing and implementing the transfer of training intervention will be \$20,000. Because you expect to train about 470 clerical /administrative employees this year, we estimated that the total implementation cost of the training program will be \$425,000. This amount reflects training costs, training personnel salaries, and required equipment, facilities and supplies. Total outlay for the training program (\$425,000) plus the consultant's recommendations (\$20,000) if followed, is therefore approximately \$445,000.

These costs should be evaluated in the context of the return the company can expect to receive. If the Relapse Prevention intervention which we are proposing does in fact result in an increase in the level of productivity, as compared to previous results from training, more overall productivity will be the measurable result. More productive employees are obviously beneficial since they produce more for the company for the same labour costs as their less productive counterparts. Utility analysis is the process that can be used for estimating the benefit to the company of training employees when training is transferred resulting in a measurable gain in overall productivity.

A utility analysis was conducted based on information gained from supervisors in your company about the value of more productive clerical /administrative employees, the expected increase in productivity, the number of employees trained, and the cost estimates for the Relapse Prevention training program. This analysis indicates that the average clerical/ administrative employee, due to increased productivity, will be "worth" \$3000 more to the organization than the average employee trained under the present system. This will be due to the increased transfer of training resulting in employees performing their jobs more effectively and continuing to improve as new policies and technology are put in place. Since the company expects to train 470 clerical /administrative employees over the course of the year, this saving equals \$1,410,000 ($470 * 3,000$) per year to the company. Furthermore, since these employees will continue to improve and will maintain their productivity over an extended period of time, an estimate can be made of these gains in productivity over time. For example, over a two year period the total benefit for the company is estimated to be \$2,820,000 ($2 * 1,410,000$). In sum, the utility analysis shows that improved transfer of training and productivity that results from the Relapse Prevention intervention has an impressive economic benefit to the company.

As the vice-president of the company, it is up to you to decide whether to implement the consultant's recommendations.