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Multi-level evaluation of a career development training program

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MULTI-LEVEL EVALUATION OF A CAREER DEVELOPMENT TRAINING PROGRAM

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by

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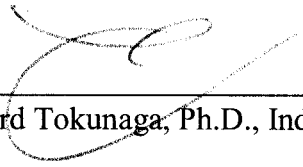

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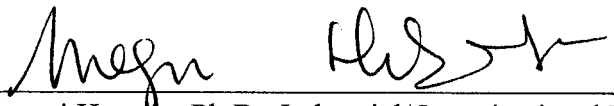

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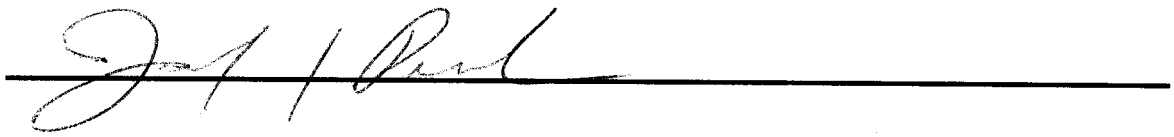

ABSTRACT

MULTI-LEVEL EVALUATION OF A
CAREER DEVELOPMENT TRAINING PROGRAM

By Laura K. T. Cox

The purpose of this study was to conduct a multi-level evaluation of the effectiveness of a career development training program. The evaluation consisted of Level 1 (reaction), Level 2 (learning), and Level 3 (transfer of training) assessments. It was hypothesized that the course would be effective at all levels, and that there would be a positive relationship between the results of each of the levels. Results indicated that students reacted positively to the course, and that participants did learn the intended material. However, there was not a significant transfer of the course material back to the jobs of the participants. Contrary to the hypothesis, an inverse correlation was found between reaction to the course and learning. The results of this study provide evidence that evaluation at the reaction level only is not a sufficient method of training evaluation. Future study on the interaction between multiple levels of evaluation is suggested.

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Introduction

With few companies offering lifetime employment in today's marketplace, professionals must constantly be aware of what their potential next career move may be. Many researchers have suggested that the idea of "loyalty for life-long employment" be replaced with the concept of "employability" (Waterman, Waterman, & Collard, 1994; Filipczak, 1995; Gutteridge, Leibowitz, & Shore, 1993). In this new employment arrangement, a partnership is formed between the employee and the company based on the employer providing opportunities to learn new skills, and the employee contributing to the company through increased productivity and profits. The difference between this new relationship and the past employment relationship is that it will last only as long as the relationship is mutually beneficial for both parties (Filipczak, 1995).

One of the "services" employees will look for from their employer is the opportunity to improve skills and prepare for future career paths, both inside and outside their current organization (Filipczak, 1995). Employees now expect development opportunities to be an integral part of their employment. Indeed, a survey conducted by Development Dimensions International reported that participation in coaching or mentoring programs was the second most influential factor responsible for reducing turnover and absenteeism (Salopek, 1998). In exchange for these added skills and development opportunities, the employer will now expect more responsive employees who will stay with the company in order to apply the skills that they have learned. Organizations that can provide this type of environment to their employees are likely to benefit in increased retention rates from the investment they have made (Filipczak, 1995).

In addition to the indirect benefits that can be achieved through employee career development programs, there are also direct benefits to the company. Waterman et al. (1994) suggest that organizations can create a "career-resilient workforce" by implementing career development programs. Employees today typically change their jobs more frequently than in the past, leaving employees feeling confused, unsuccessful, and un-motivated to contribute fully to the corporate bottom line (Gutteridge et al., 1993). However, a solid career development program that helps employees understand the reasons for each change and the benefits they will derive from each job is likely to help employees decrease such negative feelings and increase productivity and commitment (Waterman et al., 1994). The above research suggests that providing some sort of career development training or system is key to the long-term success of any organization. As a result, companies have implemented a variety of career development programs.

Types of Employee Career Development Programs

The most common type of career development within organizations, and in most cases the only one, has been the posting of available internal positions in a central location so that employees could seek out additional opportunities without having to leave the company (Ralphs & Stephan, 1986). Although this is still a popular and useful type of career development, the following research shows that some companies are now taking a more active role in employee career development.

Some of the newer approaches to career development include mentoring programs, succession planning, individualized development planning, individual career counseling, internal information networks, job shadowing, computer-based guidance

systems, interest inventories, and classroom training, to name a few (Carulli, Noroian, & Levine, 1989; Waterman et al., 1994). Through a review of career development programs in high-tech companies, Waterman et al. (1994) have identified some basic elements required for successful career development initiatives. These include employee self-assessment, a focus on maintaining competitive skills, treating employees with trust and respect, and discussing important business changes with employees. The most successful programs have combined multiple types of career development and ideally all of these components work together to send a single message to the employee that the organization values them and wants to support their career development (Waterman et al., 1994).

One example of a successful career development program can be found at the Harvard Community Health Plan (HCHP). HCHP has conducted large-scale competency assessments, and created matrices and grids from those assessments for each job. When a prospective internal applicant is interested in a job, he or she can access this information and will know exactly what skills are needed for the job (Filipczak, 1995). In addition, HCHP has created career ladders and other tools to help employees see what their potential career paths could be. HCHP has also established formal career centers, where employees can access reference materials, job listings, assessment tools, counselors, and other resources, all in a confidential setting (Waterman et al., 1994). The career counselors help employees with decision-making, interpretations of assessments, and creating development plans and resumes. Some of these counselors are brought in from

outside agencies so that the confidentiality of employee concerns, assessments, and plans can be guaranteed (Waterman et al., 1994).

At another company, the career development system was overhauled when it was no longer solving the employee turnover problem that it was originally designed to reduce. The new system involved classroom training, individualized development planning, internal job postings, formal mentoring, and succession planning (Carulli et al., 1989). One objective of the new program was to provide employees the basic tools and skills needed to manage their careers. The second objective was to create motivation and initiative in the course participants to make them want to manage their careers (Carulli et al., 1989). The management of this company chose to use multiple methods (knowing that not all methods would be effective for all employees), and ensured that line managers were closely linked to the processes, such as participating as mentors and helping to create development plans, which greatly facilitates job transfers, developmental assignments, and the use of effective feedback to employees. Although management is still faced with attrition, they believe that the system has helped to retain the knowledge of their valuable workforce within the company, as they are now actively moving employees to new positions, rather than having them leave.

As evidenced by these examples, there are many different ways to implement employee career development programs in the workplace today. Given the great variety of options available, organizations may look to the research community to help determine the best type for a particular organization. Many of the answers that can be provided are based on empirical evaluations of the effectiveness of some of these programs.

Evaluation of Career Development Programs

One type of career development that has been researched extensively is mentoring. Mentoring programs typically pair a newer employee with a more experienced employee who serves as a role model and coach regarding performance, career plans and personal development. Researchers have examined many of the factors that contribute to successful mentoring such as gender, structure of the mentoring relationship, time spent in mentoring, as well as numerous other factors (Noe, 1988; Ragins & Cotton, 1999; Gaskill, 1991; Corzine, Buntzman, & Busch, 1994; Donaldson, Ensher, & Grant-Vallone, 2000). Evaluation of mentoring programs is typically done through self-reporting by the mentors and protégés (Gibb, 1999). There are multiple theories on how and why mentoring relationships do or do not work (see Gibb, 1999 for a review), but there is a large body of research on the topic, most of which indicates that when it is implemented and carried out appropriately, it can be an effective career development tool.

Unfortunately, the empirical research on other forms of career development, such as succession planning, career centers, development planning, and coaching, is very limited. In fact, it was difficult to find any research on the efficacy of these types of interventions. However, there is a large body of literature that can be applied to evaluating the effectiveness of classroom-based career development training.

Evaluation of Corporate Training

The new focus and drive of American business dictates that training departments take a closer look at the products they offer to employees to make sure they are

contributing to the organization's bottom line. For example, the ASTD State of the Industry report (2002) pointed specifically to increasing pressure from shareholders to demonstrate the return on investment of training. There are a number of basic reasons for evaluating training: to decide whether a program is worth continuing, to improve future courses, and to justify the cost of training (Kirkpatrick, 1996). Kirkpatrick is well known for expanding the basic concepts of training evaluation by introducing "Four Levels" of evaluation that he believes can and should be used for the evaluation of training, to the maximum allowable degree according to budget, resources, and training design.

Kirkpatrick model. The original goal of the 1959 articles written by Kirkpatrick was to help define what "evaluation" meant in the training setting, and they were quickly adopted as the most popular framework for conducting training evaluations (Kirkpatrick, 1996). The model Kirkpatrick proposed attempts to assess the effectiveness of training at four different levels with each level focusing on one of the major definitions that professionals have given to the word "training."

According to Kirkpatrick (1996), the first level, Reaction (Level 1), focuses on whether or not the participants enjoyed the class or felt that it was useful; basically a customer satisfaction rating (satisfaction with training). This evaluation is intended to capture the immediate reaction of the participant following the course, often given in the form of a multiple-choice survey and request for additional comments.

The second level, Learning (Level 2), is designed to assess whether or not the information that was taught in the class was actually learned by those who participated.

Some common methods for evaluating the learning gained from a training course are a pre- and post-test, work samples, and simulations.

The third level, Transfer of Training (sometimes called "Behavior"; Level 3), is a measure of how well or to what degree the participants change their on-the-job behavior because of the effects of the training (Kirkpatrick, 1996). Level 3 evaluations are commonly implemented as surveys, work sample exercises, on-the-job performance monitoring, interviews, or other metrics specific to a particular task (such as a reduction in error rate).

The fourth level of assessment, Results (Level 4), focuses on the final business outcomes that are achieved as a direct outcome of the training. It is often measured in quantitative financial terms such as increased sales or productivity, greater profits, or reduced costs (Kirkpatrick, 1996). This level differs from Level 3 in that Level 4 is more focused on the business effects of the change in behavior, rather than just the change itself.

Relationship between levels. One interesting aspect of the Kirkpatrick model that receives relatively little attention is the question of how each of the levels relates to the others. Alliger and Janak (1989) propose that there is an implicit assumption that the levels of evaluation are causally linked, i.e. that enjoyment of the class (Level 1), leads to learning (Level 2), which leads to behavior change (Level 3). However, there are a number of reasons that Alliger and Janak believe that this assumption should be questioned. Levels 1 and 2 are often measured at the same time, indicating that there is no interval between enjoyment of the course and learning, so it could reasonably be

questioned that one causes the other (Alliger & Janak, 1989). Nonetheless, there are some circumstances in which a relationship, particularly among Levels 2, 3, and 4, would be expected. For example, it would be hard for training to have a Level 3 effect (a change in behavior), without a Level 2 effect (learning).

Alliger, Tannenbaum, Bennett, Traver, and Shotland (1997) proposed a framework based on Kirkpatrick's four levels, and tested it by performing a meta-analysis of previously published studies. The augmented framework divided the Level 1 analysis (reaction) into two subcategories: affective reaction (how they felt about the course) and utility reaction (perception of usefulness). It also divided the Level 2 analysis (learning) into three subcategories: immediate post-training knowledge, retention, and in-class behavioral demonstration. Alliger et al. (1997) discovered that the utility reactions did correlate with the immediate learning component of Level 2. In addition, the utility reaction was more strongly correlated with the Level 3 measure than it was with any of the Level 2 criteria. One of the potential reasons for this may be that the utility reactions of the trainees take into account the trainee's knowledge of their work environment and whether the environment will allow them to use their new skills. This critical data point is not figured into the learning measures (Alliger et al, 1997). Interestingly, little additional research has been conducted on the relationships between levels, and this study will seek to provide some additional information to this body of research.

Although the Kirkpatrick model is not the only framework for training evaluation, it is the most well known. Kirkpatrick (1996) comments that he attributes the model's

popularity to the fact that it is simple and practical. He observes that most training professionals do not need a scholarly, complex approach to training evaluation, but rather one that clarifies the meaning of evaluation and provides guidelines for how to get started. As a result, one of the most common criticisms of the Kirkpatrick model is that it over simplifies the complex business of evaluating training and can lead to overgeneralizations and a vague understanding of training effectiveness (Alliger & Janak, 1989). All criticisms aside, the important question with which we are now faced is whether or not organizations are using this, or any other model, to assess their current career development training programs.

Effect of Participant Motivation on Training Effectiveness

Many researchers have explored the effect of participant motivation on learning in many different contexts. Colquitt, Le Pine, and Noe (2000) conducted a thorough meta-analysis in order to better understand the literature and create an integrative theory of training motivation. They first conducted an extensive literature review. Colquitt et al. (2000) found that the significant predictors of training motivation include individual characteristics (e.g. such as locus of control, conscientiousness, anxiety, age, cognitive ability, self-efficacy, valence, and job involvement), as well as situational characteristics (e.g. climate). More research would be helpful in this area to better apply the theoretical research to the real-world classroom (Mathieu, Tannenbaum, & Salas, 1992).

Current State of Evaluation

According to results from a 2000 study on training evaluation, 78% of the organizations surveyed used Level 1 measurements to evaluate their training courses,

32% evaluated their courses at Level 2, 9% evaluated their courses at Level 3, and 7% evaluated their courses at Level 4 (Van Buren & Erskine, 2002). Ralphs and Stephan (1986) conducted a survey to answer a wide range of questions regarding human resources development in Fortune 500 companies. They found that the most common form of evaluation, accounting for 86% of evaluations, was a Level 1 course assessment completed by participants immediately after the class. Although Level 1 assessments are very simple to conduct, they are also very limited in scope. These assessments, typically a standard form used for a variety of classes, are limited by the short time frame in which they are conducted and the depth into which most of them explore. In addition, the information that can be gathered with a Level 1 assessment depends greatly on the amount of thought and energy participants spend on it, and therefore the assessment's usefulness can be quite variable (Pickles, 1996). As a result, most companies are not collecting informative data on the effectiveness of their training programs, which can make it difficult for those responsible for training to answer questions about the value of their services.

As the training trend continues to increase, and companies move forward with new career development programs, it will become increasingly important to have clear answers as to which career development programs work, and which do not. Researchers overwhelmingly agree that thorough evaluation of training is necessary in order to provide useful information on its effectiveness (Cousins & MacDonald, 1998; Krein & Weldon, 1994; Clement & Aranda, 1982; Goodacre, 1957; Erickson, 1990; Warr & Bunce, 1995). One way to increase the validity of training evaluation is to use the

Kirkpatrick model to conduct evaluations at all levels rather than just the Reaction level, or Level 1, as so many training programs today are evaluated.

Current Study

The primary goal of this study is to conduct a more thorough analysis of a classroom training career development program than has previously been implemented. This course was chosen, in part, due to the lack of experimental research on the effectiveness of classroom training for teaching career development skills. The course, called "Managing Personal Growth" (MPG), designed by Blessing/White, Inc. (1993), was designed to teach employees to take control of their careers and to assume responsibility for their career development. The course consists of a series of values clarification exercises, skill assessments, and career decision-making opportunities. These exercises help participants identify the critical skills and talents required for their jobs. In addition, the exercises provide employees with performance feedback from their manager and a methodology to help them discuss potential performance problems or disagreements about performance with their management. The resulting goal is for participants to identify actions they can take to increase their satisfaction at work.

The course had traditionally been evaluated using a standard Level 1 evaluation form only, and the results from the evaluations were tabulated quarterly and distributed throughout the training organization. There was an attempt made to track the transfer of training back on the job, but the follow-up on the part of participants was poor and did not provide consistent data.

The purpose of this study is to conduct a Level 1, Level 2, and Level 3 evaluation in order to better understand whether or not the career development course is effective. Level 4 analyses will not conducted because there is insufficient opportunity to control for the numerous factors that might affect an organization's results (e.g. business conditions, sales volume, upper management decisions, individual job changes). Also, the current study hopes to provide more complete data about the effectiveness of instructor-led classroom training as a method for career development. Exploratory research into the effects of participant motivation on the Level 1, 2, and 3 analyses will also be conducted.

It is hypothesized that the Level 1 evaluation will show that participants react positively to this course at least as well as to other courses offered by the company, as measured by comparison to a hypothetical mean. It is further hypothesized that the Level 2 and Level 3 analyses will show that participants learn the material that was presented, change some of their attitudes regarding career development, and also apply that learning back on the job.

Finally, it is hypothesized that there will be a positive relationship between the results of the Level 1, Level 2, and Level 3 evaluations. More specifically, it is hypothesized that positive Level 1 reactions will lead to positive Level 2 measures of learning and increased transfer of training (Level 3). Furthermore, positive measures of Level 2 learning are expected to predict positive Level 3 transfer of training.

Method

Course Context

The corporation at which the current study was conducted is a global, Fortune 500 company based in San Jose, California. With approximately 18,000 employees worldwide at the time of the study, it is a major supplier of advanced technology manufacturing equipment. As with many high-tech corporations, the company experiences great fluctuation in business based on the market situation, and has a cyclical nature with periodic upturns and downturns. The company has been successful and is very fast-paced. Due to the high-stress nature of the environment, employee development has often been overlooked. A regular employee satisfaction survey revealed that one of the largest employee complaints was that they did not feel as though the company provided clear opportunities for employee career development. In an attempt to correct this perception, the company chose to bring "Managing Personal Growth" (MPG) course to the company in order to assist employees in their career development. It was introduced to the company in 1995, and approximately 1357 employees participated in the course between 1995 and 1998.

Participants

The participants in this study were adult employees who participated in the MPG course. Employees were recruited to take this course through standard company-wide internal advertisements, and through communications from managers and colleagues. Overall, there were a total of 78 participants across all levels of evaluation. All potential participants were asked to voluntarily participate in each level of evaluation through a

cover letter provided with each instrument. No payment was given in return for participation in the study, although refreshments were provided to participants as an incentive to remain after the course was over to complete the Level 1 evaluation and post-test for Level 2 evaluation.

This study had a longitudinal design, in that all participants who were invited to participate in the Level 1 evaluation were also potential participants for the Level 2 and Level 3 evaluations. Likewise, those participants who were asked to participate in the Level 2 evaluation were also asked to participate in the Level 3 evaluations. However, in order to increase the potential sample size for the Level 3 evaluation, the Level 3 measure was distributed to more potential participants than the Level 1 and Level 2 measures.

Level 1 Evaluation (Reaction). There were 42 total participants, of whom 76% were male and 24% female. Seventy-eight percent of the participants were professional, exempt employees, while 22% were non-exempt (hourly) employees. In terms of education, 56% of the participants had a Bachelor's degree and 25% had a graduate degree. The length of time at the company ranged from 5 to 108 months (M = 29.4 months). There were 17 participants from class date A (July 24, 1998), 15 participants from class date B (July 31, 1998), and 10 participants from class date C (August 6, 1998). Each class was generally attended by 18 students, and thus the response rate was approximately 78%.

Level 2 Evaluation (Learning). There were 35 employees who participated in the pre-test, and 41 employees who participated in the post-test, for an overall total of 46 participants. There are a number of possible explanations for this discrepancy in sample

size between pre- and post-tests. As the researcher did not have any control over whether or not employees completed the pre-test before coming to the class, there were 11 employees who did not complete the pre-test, but completed the post-test once they were at the class. There were also 5 employees who completed the pre-test, but did not complete the post-test. These employees may have missed the class, or were unable to stay after class to participate in the post-test. There were 30 participants who completed both the pre- and post-tests. In addition, 39 of the participants had also participated in the Level 1 evaluation, a 93% carry-over from Level 1 to Level 2.

The participants were 71% male and 29% female, and the length of time at the company ranged from 5 to 108 months (M=28.7 months.). Seventy-eight percent of the participants were professional, exempt employees, while 22% were non-exempt (hourly) employees. In terms of education, 56% of Level 1 participants had a Bachelor's degree and 24% had a graduate degree. There were 18 participants from class date A (July 24, 1998), 18 participants from class date B (July 31, 1998), and 10 participants from class date C (August 6, 1998). Each class was generally attended by 18 students, and thus the response rate was approximately 85%.

Level 3 Evaluation (Transfer of Training). There were 35 total participants in the Level 3 evaluation; however, we were not able to collect detailed demographic data on this group. One hundred, fifty-five past-participants of the MPG courses were invited to participate, which led to a response rate of 23%. In addition, only 3 of the participants had also participated in the Level 1 and Level 2 evaluations.

Measures

Level 1 Evaluation (Reaction). The Level 1 questionnaire contained 14 items designed to gauge the participants' reaction to the course, i.e. whether or not they enjoyed the course and felt that it was useful (see Appendix A for a copy of this instrument). All items were responded to on a 5-point Likert scale, with the following response options: Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, or Strongly Agree. The questions for the Level 1 assessment were taken from the standard 10-item evaluation form currently used by the company. Four items were added to make statements more clear and to allow for a more detailed analysis on how valuable the course was. For statistical analyses, the questionnaire items were broken down into two sub-scales of Instructor Quality (Items 1, 2, 3, 4, 5, 10, and 11) and Presentation Materials Quality (Items 6, 7, 8, and 9). The Instructor Quality subscale was designed to assess the specific reaction that participants had to the instructor delivering the course in terms of their content knowledge and overall presentation effectiveness. The Presentation Materials subscale was designed to assess the reaction of the participants to the visual aids, course binder, and related materials in terms of their effectiveness and contribution to the participants' learning.

Response items were coded between –1.0 and 1.0 to indicate the participants' level of agreement with a particular item, with a higher score indicating more agreement (Strongly Disagree = -1, Disagree = -.5, Neither Agree nor Disagree = 0, Agree = .5, or Strongly Agree = 1). Scores for the Reaction Total were calculated by adding the item scores for each participant on all items. Scores for the Instructor Quality and

Presentation Materials sub-scales were calculated as the mean of the scores on the identified items. Reliability analyses were conducted on the Reaction Total scale, as well as each of the two subscales in order to check for internal reliability, and all were found to have values of Cronbach's alpha greater than .90 (exact values can be found in Table 1).

Level 2 Evaluation (Learning). The purpose of the Level 2 measures was to assess participants' knowledge about the course content before and after the class. The pre- and post-test questionnaires were identical (see to Appendix B for a copy of the pre-test). Ten items were developed in coordination with a course content expert and were written to assess the extent to which the course content was learned during the course, and the extent to which key attitudes about career development were changed as a result of the course.

Each item on each of the Level 2 tests was scored as either right or wrong, and a pre-test and post-test score was calculated for each participant in terms of the difference between the number of questions answered correctly and the number of questions answered incorrectly. Test items with the correct answers indicated can be found in Appendix C. The differences between pre- and post-test total scores were used to conduct overall analyses between the two testing sessions. In addition, an *a priori* sub-scale focusing on attitude change was calculated in order to assess the degree to which the participants embraced the key messages of the course (Items 4, 5, and 6 in Appendix B). This sub-scale contained those items that measured a participant's attitude towards their career development in terms of who was responsible for it, and where their future

Table 1

Descriptive Statistics on Level 1 (Reaction) Items

	n	M	SD	Range		
Instructor Quality						
1. Course objectives were well communicated	42	.75	.47	-1.0 to 1.0		
2. Instructor's knowledge was appropriate	41	.71	.42	-1.0 to 1.0		
3. Instructor used effective teaching skills	42	.74	.42	-1.0 to 1.0		
4. Student involvement was encouraged	42	.69	.41	-1.0 to 1.0		
5. Instructor managed class well	41	.72	.42	-1.0 to 1.0		
10. Information presented in a logical order	42	.61	.44	-1.0 to 1.0		
11. Delivery was interesting/engaging	42	.63	.46	-1.0 to 1.0		
Presentation Materials						
6. Materials were accurate	42	.69	.47	-1.0 to 1.0		
7. Materials were helpful	42	.67	.48	-1.0 to 1.0		
8. Materials were well-designed	42	.67	.49	-1.0 to 1.0		
9. Materials complemented course objectives	42	.64	.46	-1.0 to 1.0		
Overall Items (Not part of any sub-scale)						
12. Course was relevant to me	42	.73	.46	-1.0 to 1.0		
13. Would recommend this course	42	.68	.41	-1.0 to 1.0		
14. Would take other courses with this method	42	.54	.42	-1.0 to 1.0		
Composite Scales						α
Instructor Quality	42	.69	.37	-1.0	1.0	.95
Presentation Materials	42	.67	.44	-1.0	1.0	.95
Reaction Total	42	9.42	5.09	-14.0	14.0	.96

career opportunities existed. The scores on the Attitude Change sub-scale were calculated in the same way as the total scores (number correct – number incorrect). Item number 10 was eliminated from all analyses due to a lack of clarification on the correct response.

Level 3 Evaluation (Transfer of Training). The Level 3 evaluation questionnaire contained 16 items designed to gauge whether or not the participant applied what they learned from the class back on the job (see Appendix D for a copy of this questionnaire). The items were developed in coordination with a course content expert and were written to assess the extent to which the training transferred back to the workplace in terms of activities, change in the participants' relationship with their manager, and change in positive perceptions of the company.

The items on the Level 3 questionnaire were coded to reflect 1 point for each response that indicated transfer of training. These points were added to create a Total Transfer score for each participant. In addition, one *a priori* sub-scale, Relationship with Manager, was created from five items (Items 7, 8, 10, 14, and 15). This sub-scale measured the degree to which the participants' communication and interpersonal relationship with their immediate supervisors was positive. This was measured because some of the skills learned in the course, such as techniques for better communication, would be expected to improve a participant's relationship with their manager. Reliability analyses were conducted on the Total Transfer scale (α=.87), as well as the sub-scale (α=.74), and both were demonstrated to have sufficient internal reliability.

Motivation. Participants were asked to select one of seven motivational reasons as a part of the demographic data collected with the Level 1 questionnaire. The Internal category, n=12, contained the following response items: "I was interested in the topic" (n=5), and "To enhance my job skills" (n=7). The Required category, n=7, contained these items: "It was required by my manager" (n=6), and "Required to complete 40 hour training requirement" (n=1). The last category, Recommended, n=10, contained the following response: "It was suggested by my manager".

Procedure

Prior to class attendance. Potential participants were sent the pre-test instrument for the Level 2 evaluation by inter-office mail. The information packet contained a cover letter explaining the study and asking for their participation, while acknowledging that the test was optional and not required for the course, and that their results would be kept confidential. This was sent approximately 2-3 weeks before they were scheduled to attend the MPG course, and was sent only to those participants who had signed up to attend one of three randomly selected sessions of MPG, during which this study was to take place (July 24, 1998, July 31, 1998, and August 6, 1998). The participants did not know at the time they signed up that this study was going to be conducted. Employees who chose to participate were asked to complete the test and bring it with them to the first day of class. The completed forms were collected at the beginning of the class from those who had them.

Immediately following the class. The class lasted approximately one and a half days. At the conclusion of the class, the class facilitator introduced the researcher who

explained the study by stating the research objectives, and handed out a questionnaire to the participants. The questionnaire included the Level 1 items, as well as the post-test items for the Level 2 evaluation. In addition, there were four demographic variable items that participants were asked to answer about themselves, as well as the item identifying their motivation for attending the course (see Appendix A). This questionnaire was accompanied by a cover letter explaining the study and asking for their participation, while acknowledging that completing the questionnaire was optional and not required for the course, and that their results would be kept confidential. Refreshments were available and the participants handed in their forms to the researcher when they were completed. The average completion time for both the Level 1 instrument and the Level 2 post-test was approximately eight minutes.

After the class. Approximately six to ten weeks after the Level 1 and Level 2 participants attended their class, the Level 3 questionnaires were mailed out to the past participants through the internal e-mail system. This questionnaire was also accompanied by a cover letter explaining the study and asking for their participation, while acknowledging that completing the questionnaire was optional and not required for the course, and that their results would be kept confidential. In order to increase the sample size of participants, the questionnaire was sent not only to those employees who had attended one of the three identified sessions of MPG, but it was also sent to all employees who attended the course in the previous 7 months. The questionnaires were completed and returned to the researcher either through e-mail or inter-office mail. The length of

time between when the participant took the course and the time they received the questionnaire varied between 20 and 470 days (M=208 days).

Results

Level 1 Evaluation (Reaction)

Descriptive statistics on each item, as well as the composite scores for participant reactions to the training course are presented in Table 1. Means for all items were above 0.5, indicating that the majority of participants agreed or strongly agreed with the statements about the course. In order to isolate the effects of possible confounding factors, a single-factor between participants analysis of variance (ANOVA) was conducted to determine if there was any effect of the date of the course (July 24, 1998, July 31, 1998, or August 6, 1998) on Reaction. This analysis revealed no significant effect of course date on the Reaction Total scale, $F(2,39) = 0.79$, $p > .05$, or on either sub-scale (Instructor Quality: $F(2,39) = 0.22$, $p > .05$ and Presentation Materials: $F(2,39) = 0.97$, $p > .05$). Descriptive statistics on Reaction ratings as a function of course dates are presented in Table 2.

A hypothetical mean was selected in order to determine if the course was significantly more well liked than other training courses provided at the company. The hypothetical mean was selected based on a belief that individuals who attend training classes generally respond positively to the courses, and would therefore agree with the statements on the questionnaire, but not strongly agree with the statements. As the "agree" response was coded as .5, and the overall score for each participant was a sum of all individual item scores, the hypothetical mean that was selected was 7.0 (14 x .5 = 7.0). A one-sample t-test was calculated to test the observed mean of 9.42 against the hypothetical mean of 7.00 and the difference was found to be significant, $t(41) = 3.08$,

Table 2

Descriptive Statistics for Level 1 Scores by Course Date

		July 24, 1998 (n=17)	July 31, 1998 (n=15)	August 6, 1998 (n=10)
Instructor Quality	M	0.65	0.72	0.73
	(SD)	(0.47)	(0.37)	(0.17)
Presentation Materials	M	0.58	0.66	0.83
	(SD)	(0.49)	(0.49)	(0.21)
Reaction Total	M	8.29	9.80	10.75
	(SD)	(6.48)	(4.69)	(2.14)

$p = .004$, indicating that this course was more well-liked than would normally be expected from a training course offered at this company, and supporting our stated hypothesis.

Further analyses were conducted to examine the effects of participant motivation on participant reaction. As mentioned earlier, participants were asked to indicate their motivation for attending the course by selecting one of seven possible reasons. These responses were then aggregated into 3 categories: Internal, Required, or Recommended. Single-factor ANOVA demonstrated no effect of motivation on the Reaction Total score ($F(2,26) = 1.61$, $p > .05$) or either sub-scale (Instructor Quality: $F(2,26) = 1.11$, $p > .05$ and Presentation Materials: $F(2,26) = 1.09$, $p > .05$). However, a comparison of the means, which can be found in Table 3, shows that those employees who were required to attend the class generally reacted less positively than those who attended because of internal motivation or a recommendation from others. These results suggest that although there was no significant effect of participant motivation on Level 1 reaction, there was a tendency for participants who were required to attend the class to react less positively than those who were not.

Level 2 Evaluation (Learning)

Response frequencies for each item, as well as descriptive statistics for the Overall and Attitude Change scores, are shown in Table 4. On all items, a higher percentage of participants answered correctly on the post-test than on the pre-test, and the percentage of incorrect answers decreased from pre-test to post-test. Paired sample t-tests were conducted in order to test for an improvement in Learning. First, the

Table 3

Effect of Motivation on Level 1 Scores - ANOVA

		Presentation Materials	Instructor Quality	Reaction Total
Internal (n=12)	M	0.75	0.77	10.67
	(SD)	0.24	0.20	2.56
Required (n=7)	M	0.48	0.59	7.50
	(SD)	0.63	0.48	5.89
Recommended (n=10)	M	0.73	0.71	9.95
	(SD)	0.36	0.18	3.16

Table 4

Valid Percentage of Responses on Learning Measure Items

	Pre-Test		Post-Test	
	n	% Right	n	% Right
1. Can you quickly identify your top 5 values	35	80.0	41	92.7
2. Can you quickly identify job satisfaction factors	35	68.6	41	70.7
3. Can you identify key interview questions	33	81.8	41	92.7
4. Who is responsible for your development	35	48.6	41	65.9
5. Best way to increase job satisfaction	32	34.4	33	51.5
6. Where are your best career opportunities	33	45.5	40	52.5
7. Focus of "Managing Personal Growth"	33	87.9	37	89.2
8. Definition of Performance Priority	31	54.8	40	62.5
9. Definition of Critical Skill	32	46.9	40	62.5

	n	M	SD	Min	Max	n	M	SD	Min	Max
Sub-scale: Attitude Change	35	-0.40	1.50	-3.0	3.0	41	0.40	1.55	-3.0	3.0
Overall	35	1.91	2.44	-3.0	7.0	41	3.70	3.40	-4.0	9.0

differences between the pre-test Overall scores and the post-test Overall scores were analyzed, $t(29) = -4.04$, $p < .001$, and then the differences in pre- and post-test Attitude Change scores, $t(29) = -3.47$, $p = .002$, were evaluated. Results of both paired t-tests showed a significant increase in correct responses between the two testing sessions, indicating, in support of the hypothesis, that overall, participants did learn the intended material from the course, and more specifically, their attitudes regarding career development changed in a way that could be beneficial to the company.

Single-factor ANOVAs were calculated to determine if there was any difference in the improvement on the Overall score or Attitude Change score as a function of participant motivation (means are presented in Table 5). Neither test revealed any effects of motivation on Learning (Overall: $F(2,17) = 0.16$, $p > .05$ and Attitude Change: $F(2,17) = 0.49$, $p > .05$), indicating that a participant's motivation for attending the course did not affect their learning from it.

Pearson correlation coefficients were also calculated to determine if there was any relationship between the Level 1/Reaction scores, and Level 2/Learning scores (see Table 6). Only one of the correlations, between the Instructor Quality sub-scale from Level 1 and the Overall score from Level 2, was significant ($r = -.39$, $p < .05$). Interestingly, this analysis suggests that learning from the course actually decreases as perception of instructor quality increases, which did not support our original hypothesis. Furthermore, although this was the only correlation that was significant, all of the correlations were negative, which further supported this inverse correlation and prompted further investigation.

Table 5

Effect of Motivation on Level 2 Scores - ANOVA

		Attitude Change	Overall Score
Internal (n=8)	M	0.63	1.63
	(SD)	1.41	2.83
Required (n=5)	M	1.40	2.00
	(SD)	1.95	1.87
Recommended (n=7)	M	1.14	2.43
	(SD)	1.07	3.15

Table 6

Correlation between Level 1 and Level 2 Scores

	M	SD	n	Pearson r		
				Instructor Quality	Presentation Materials	Overall Reaction
Level 2: Attitude Change	0.90	1.42	30	-.28	-.28	-.28
Level 2: Overall Improvement	1.90	2.58	30	-.39**	-.11	-.27

** $p < .05$

The Level 1 measures, Overall score, Instructor Quality, and Presentation Materials, were each dichotomized into high scoring and low scoring participants. This division was made at the median of each scale (medians are presented in Table 7). Single-factor ANOVAs were calculated to identify differences in either of the Level 2 variables, Attitude Change and Overall score, between the Level 1 high- and low-scoring participants; however, all differences were non-significant (see Table 7). These analyses did not help to identify the reason for the negative correlations, and thus additional analyses were conducted.

A similar division was made within each of the Level 2 variables to create high- and low-scoring groups on both the overall Level 2 scale, as well as the Attitude Change scale (division was again made at the medians and is presented in Table 8). All but one of these analyses demonstrated a significant result, further supporting the above finding that those participants who were in the high-learning groups actually reacted more negatively to the class than those in the low-learning groups; F-values and descriptive statistics are presented in Table 8.

In order to ensure that this finding was not a result of differences in pre-test scores, i.e. that those participants who did not like the course learned more from it due to the fact that their Level 2 pre-test score was lower, participants were divided (at the median) into low- and high-baseline groups. Single-factor ANOVAs were conducted to compare these two groups on each of the Level 1 measures, however, each of these analyses was non-significant. This indicates that the relationship between Level 1 and Level 2 ratings discovered earlier is not a result of a lower baseline knowledge of the

Table 7

Effect of Level 1 Scores on Level 2 Scores - ANOVA

		Presentation Materials Median = 0.75 df (1, 28)			Instructor Quality Median = 0.75 df (1, 28)			Overall Median = 10.0 df (1, 28)		
		Low (n=11)	High (n=19)	F	Low (n=12)	High (n=18)	F	Low (n=9)	High (n=21)	F
Attitude Change	M (SD)	1.45 (0.93)	0.58 (1.57)	2.80	1.25 (1.22)	0.67 (1.53)	1.22	1.11 (1.36)	0.81 (1.47)	0.28
Overall	M (SD)	2.27 (2.61)	1.68 (2.60)	0.36	3.00 (2.86)	1.17 (2.15)	4.02*	1.56 (1.88)	2.05 (2.85)	0.22

* $p < .10$

Table 8

Effect of Level 2 Scores on Level 1 Scores - ANOVA

		Attitude Change Median = 1.00 df (1,27)			Overall Median = 2.00 df (1,28)			Baseline Level 2 Median = 1.00 df (1,29)		
		Low (n=13)	High (n=16)	F	Low (n=12)	High (n=18)	F	Low (n=7)	High (n=24)	F
Instructor Quality	M (SD)	0.87 (0.13)	0.71 (0.16)	7.79**	0.86 (0.15)	0.73 (0.15)	5.61*	0.77 (0.16)	0.77 (0.18)	0.00
Presentation Materials	M (SD)	0.88 (0.17)	0.70 (0.26)	4.27*	0.84 (0.23)	0.74 (0.23)	1.59	0.68 (0.28)	0.78 (0.27)	0.72
Overall	M (SD)	11.80 (1.79)	9.78 (2.26)	6.93**	11.79 (2.08)	9.94 (2.06)	5.75*	10.14 (2.19)	10.52 (2.73)	0.11

** $p < 0.01$
* $p < 0.05$

course content in one group, which would allow for greater improvements in knowledge after the course for that group (see Table 8).

Level 3 Evaluation (Transfer of Training)

In order to test for the effects of training on the Total Transfer score ($\underline{M}$ = 7.33, $\underline{SD}$ = 3.80), a hypothetical mean of 7.0 was chosen as a comparison point, as this is the midpoint for the range of possible scores. A one-sample t-test was calculated, ($\underline{t}(34) = -1.05$, $\underline{p} > .05$), which did not demonstrate a significant difference between the observed and expected mean. This indicates that, contrary to our hypothesis, there was not a significant transfer of the course material back to the jobs of the participants.

Item frequencies and descriptive statistics for Level 3 evaluation items are shown in Table 9. Note that although the overall transfer of training was not statistically significant, it can be seen that some items were true for a large number of participants, such as whether a participant's performance priorities were more clear after the course, and whether or not a participant had created a development plan, (77.1% and 85.7% respectively). What is most intriguing is that except for the question about the creation of a development plan, those items that measured some action on the job, such as the plan being carried out, being given new opportunities or having more frequent communication, received all relatively low scores. Additional analyses were conducted to further understand these findings.

Chi-square tests were performed on four individual items of particular interest: "Did you create a development plan", "Has that plan been carried out", "Are you motivated to make a greater contribution to the company", and "Are you more satisfied

Table 9

Descriptive Statistics on Transfer of Training Items

	n	Yes (Valid %)				
1. Performance priorities more clear	35	77.1				
2. Did you create a development plan	35	85.7				
3. Has that plan been carried out	33	51.5				
5. Opportunity to use talents more	35	54.3				
6. Has use of your talents been a goal for you	20	100				
7. Has use of your talents been a goal for your manager	19	89.5				
8. More frequent communication	34	29.4				
10. More comfortable communication	34	55.9				
11. Motivated to make a greater contribution	35	51.4				
12. More satisfied with job now	35	62.9				
	n	M	SD	Min	Max	
13. Training gave me required tools	35	.49	.31	-.5	1.0	
14. Able to discuss my development	35	.37	.31	-.5	1.0	
15. My manager understands and supports my goals	34	.41	.38	-.5	1.0	
16. Have specific plans for increasing job satisfaction	35	.39	.37	-1.0	1.0	
						α
Relationship with Manager (Items, 7, 8, 10, 14, 15)	35	2.09	1.52	0.0	5.0	.74
Total Transfer	35	7.33	3.80	0.0	14.0	.87

with your job now"? These items were chosen because they were identified as being most closely linked to the key objectives of the course, as well as to the retention of employees at the company. The Chi-square test on the first item, "As a result of your development discussion, did you develop a plan to address your development needs", revealed that once the participants met with their managers, a significant percentage of them, 85.7%, did create a development plan (χ^2 (1) = 17.86, $p < .000$). However, Chi-Square tests on the other three items did not show a significant transfer of training (see Table 10). These results indicate that even though many participants created a development plan, few plans were implemented and the course did not increase job satisfaction or the participants' motivation to make a greater contribution to the company. Further descriptive analyses showed that the most common reason for a development plan not being implemented was that the participant switched jobs before the plan could be carried out (38.5% of respondents).

Unfortunately, the sample participants who participated in the Level 3 analysis did not sufficiently overlap with those who took part in the Level 1 or Level 2 analysis, and sufficient data to conduct an analysis of the effect of motivation, reaction, or learning on transfer of training was not available ($\underline{n} \leq 3$).

Table 10

Chi-square Tables of Key Level 3 Items

	Valid % of Responses		
	Yes	No	$\chi 2$
2. As a result of discussion, did you create a plan	85.7	14.3	17.86***
3. Has the plan been carried out	51.5	48.5	0.03
11. Are you more motivated for the company	51.4	48.6	0.03
12. Are you more satisfied with your job	62.9	37.1	2.31

*** $p < 0.001$

Discussion

The major purpose of this study was to conduct a multi-level evaluation of a career development training program in order to make more accurate assessments of training effectiveness than were previously available. Participants' reaction to the class, or Level 1 evaluation, was measured by a standard questionnaire that was completed immediately after the completion of the course. In order to measure Learning, or Level 2 evaluation, students were asked to complete a pre-test before the class, and the scores on the test were compared to those on a post-test taken immediately after the class. A follow-up survey was used after the delivery of the course in order to measure Level 3, or transfer of training, evaluation. It was hypothesized that the Level 1 evaluation would show that participants liked this course at least as well as other courses offered by the company, and that the Level 2 and Level 3 analyses would show that participants learned the material that was presented, changed some of their attitudes regarding career development, and also applied that learning back on the job. In addition, it was hypothesized that there would be a positive relationship between the results of the Level 1, Level 2, and Level 3 evaluations.

Summary of Results

Reaction. Consistent with the hypothesis, the analyses of participants' reactions to the training program (Level 1 evaluation) revealed that participants liked the career development training class significantly more than would be expected of other classes at the company. Additional analyses were conducted in order to determine the effect of participant motivation on their reaction to the course. Although these showed no

significant effect on reaction to the course as a function of motivation for attending the course, there was a tendency for employees who were required to attend the course to react less positively than participants whose attendance was not required.

Learning. Also consistent with the hypothesis, the Level 2 evaluation showed that the scores on both overall learning, as well as changes in attitudes as they related to career development, increased significantly after exposure to the career development training program, indicating that the course was successful in teaching the participants the course material. As in the Level 1 analysis, further tests conducted to assess the effect of participant motivation on learning revealed that the reason a participant chose to attend the class did not have any effect on their learning of the material. Whether an individual attended of their own interest, the course was recommended to them, or they were required to attend, did not seem to effect whether they learned from the course.

Correlational analyses between participants' reaction to the class (Level 1) and their learning in the class (Level 2) were, contrary to the hypothesis, shown to be inversely related. Although only one of the correlations reached a statistically significant level, all of the correlations show that the less participants enjoy the class, the more they seem to learn from it. In particular, those employees who were in the top 50% of learners liked the class significantly less well than others, and these results could not be attributed to differences in initial test scores. Alliger and Janak (1989) proposed that one possible reason for a negative correlation between Reaction and Learning is that employees learn only when they reach the point of experiencing the training as unpleasant. However, the

current study does not provide support for this theory, as the average Reaction scores, even for the high-learning groups, were still relatively positive.

Transfer of Training. Analyses of the transfer of training variables showed that while the majority of the participants did create an initial development plan, when they got back to their jobs after the training few took additional steps to implement them. Our hypothesis that the course would lead to transfer of training was not supported. In fact, the additional analyses conducted on key variables did not show that a substantial number of employees were experiencing changes in their work environment as a result of attending this course. Some research indicates that there are complex issues that affect the transfer of training back to the job, such as training climate and continuous-learning culture (Tracey, Tannenbaum, & Kavanagh, 1995). In order to understand the reasons that the transfer of training did not occur as planned, we would have to evaluate the organization along the above-mentioned factors.

Implications of Findings

Reaction. There are numerous factors that contribute to whether a learner enjoys taking a particular course (e.g., convenience, teaching quality, previous knowledge). Thus, it is difficult to imply that similar results would be found in other career development training programs in other organizations. It is not surprising that the reactions of employees to this course were positive. Given that this course was introduced in response to a specific employee desire for greater career development opportunities, it is possible that many career development training programs, regardless of quality, would have been met with positive reactions from the employees in this

organization. What is particularly informative to the organization providing the course is that it provides evidence that, at least in the employee's perception, this is a value-added course that may have an indirect positive effect on employee morale, in that it shows employees that their concerns were heard and acted upon.

Learning. It is encouraging that participant scores on the knowledge of course material increased significantly between pre- and post-tests. This provides general support to the theory that small group, classroom training (i.e., 15-20 participants per instructor), is an effective way to teach adult learners. It also provides some positive support for the broader question on whether classroom training is an effective vehicle for teaching career development skills. Although many other methods are used to provide career development information to employees, such as mentoring or assessment centers, classroom training is another method that could be utilized in the future.

In addition, the results of the present study suggest that more organizations might want to consider adding a Level 2 evaluation (Learning) to their evaluation practices for specific classes, particularly those that contain vital content, or those that require "proof" that they are effective. For this particular organization, the positive results could serve as a justification to enroll more employees in the course in order to more proactively address employee concerns about lack of career development opportunities overall.

The implications of the inverse relationship that was discovered between positive Reaction and Learning are potentially far-reaching. Many organizations make an implicit assumption that if they assess their courses at Level 1, and if the assessment is positive, then employees must be learning the material. However, such an assumption could be

risky given what we have found in the present study. The results of this study provide additional evidence to support the idea that evaluation at the Reaction level alone is not a sufficient way to evaluate training courses, and more complex analyses or multi-level assessment must be done in order to determine if a course is meeting its objectives. Without fully understanding the relationship between Reaction and Learning, many organizations may be unaware of the actual effectiveness of the courses they are providing. Further information about this potentially complex relationship is needed, but at least on the surface, it appears that course administrators may want to concentrate less on making courses enjoyable as a part of course design and delivery, and instead focus on other factors, such as skill practices, testing knowledge, and continuous reinforcement of the training material after the course.

Transfer of Training. As for the analyses of the transfer of training back to the job, the results were not encouraging, and seem to warrant serious attention from an organizational perspective in terms of developing and delivering value-added training. This study suggests that even though employees generally enjoyed participating in the class and learned the intended content, the application back on the job was practically non-existent. As the data showed, the majority of the participants took the initial steps to create a development plan, but the transfer stopped there. For most participants, there was no increase in opportunities, no increase in job satisfaction or commitment to the company, and few follow-up conversations with their management. This tells us that knowledge is not all that is needed to support career development activities back on the job. It is possible that some of the variables identified in previous research (Tracey et al.,

1995) as being necessary for effective transfer were not present in the work environment at the time of the study (e.g. continuous-learning culture, policies, reward systems, managerial behaviors).

The organization in which this study was conducted, at least at one point in time, was lacking in career development for its employees, and it may be that the organization has not yet fully embraced the idea in the work units. In addition, the fast pace of this high-technology company might make it a challenging environment in which to focus on issues that are not directly linked to contributing to the bottom line. Frequent layoffs may also have contributed to a cynical view of career development where employees are not fully invested because they have seen numerous actions taken by the company that have impacted co-workers' careers without any input from the employee. Organizations might want to invest in further research or tools in this area to identify characteristics of their corporate culture that could enhance or impede training effectiveness.

All corporate culture factors aside, the most common reason given by participants in this study for not following through with a development plan once it was created was that the employee switched jobs before it could be carried out. Although this movement has created a problem for career development for employees, it also presents an opportunity. Although this study did not specifically ask whether the changes in jobs were of a developmental nature, we can infer from the data we do have, that they most likely were not. It is the opinion of this researcher that if the corporation could find a way to better match job changes to employee's developmental goals, they may see greater job satisfaction, greater productivity, and lower turnover rates. The struggle that

organizations face is to create career development systems that are flexible enough to allow for frequent business changes, but are also robust enough to be effective for the employee. These results, and those of previous researchers, demonstrate that a clear and concerted effort is needed at the organizational level to create an environment, tools, and processes that will be open and receptive to employees applying what they have learned back to their work environment and taking responsibility for their career development.

The effects of motivation on learning. As was discussed earlier, many researchers have investigated the effect of trainee motivation on learning (Colquitt et al., 2000; Mathieu et al, 1992; Warr & Bunce, 1995). Analyses of the Reaction and Learning measures in this study did not demonstrate any significant effects as it related to participant motivation, however there was a tendency for participants who were required to attend the course to react less positively to it than other participants. More research should be conducted in order to better understand this relationship. As a part of that body of research, different testing scenarios, in both laboratory and real-world situations, should be assessed.

Strengths and Limitations of the Study

The greatest strength of this study lies in its breadth. This study was able to collect evaluation data at multiple levels, which has been uncommon in the past. In fact, Alliger and Janak (1989) found that only 2% of the studies reported included both a Level 1 (Reaction) and a Level 2 (Learning) evaluation, and no studies contained all three. This study, with its analysis at multiple levels, allowed us to look at the effects of one level on another, which has been a significant gap in the research to date. In

addition, the process was relatively easy to administer, and could be automated to decrease both time and cost burden, considerations that may be of particular interest to organizations considering implementing multiple level training evaluations.

As with most studies in this area of research, the largest limiting factor was the small sample size. In particular, the relatively small number of participants who participated in the all levels of assessment was too small to complete the correlational analyses relating Level 1 and 2 to Level 3. In addition, during the course of this study, a reduction in force was initiated at the company. As a result, some participants were no longer employees of the company and could not provide the needed data, and the change in culture may have had unknown effects on the data that were collected. Lack of statistically significant findings might have been due to the small sample size.

Future Research

There are a number of future research issues that need to be addressed that flow logically from the present study. The issue of participant motivation on Reaction, Learning, and Transfer of Training needs additional exploration. Future research should be addressed at not only how motivation is related to Reaction, Learning, and Transfer of Training, but also at how the relationship between motivation and each one of the training outcomes is moderated by other factors (e.g., organizational climate, supervisor support).

Further research investigating more thoroughly the relationship between Reaction and Learning is needed. The implication of the inverse relationship discovered in the present study could be far-reaching, impacting course design, delivery, enrollment, and,

of course, evaluation. An important question to answer in future studies is how can course providers manipulate the in-class experience to influence how well course material is learned. Perhaps some testing on different methods of increasing learning through manipulation of the "likeability" of a course is warranted. In addition, it will be important to test new methods of increasing transfer of training back on the job, taking into consideration organizational constraints and how to best mitigate any negative effects on training transfer.

Conclusions

The need for more thorough evaluation of training programs is clear. Spending on training continues to grow in US companies. In fact, between 2000 and 2001, organizations increased their spending on training by 10%, even while the economy was in a downturn (Van Buren & Erskine, 2002), and it is unlikely that companies will continue to spend millions of dollars without verification that the money is being spent responsibly. The results from this study, as well as many others, have demonstrated that evaluation at only the Reaction level is incomplete at best, and misleading in some situations. Even so, the recent survey data indicate that only 32% of companies attempt to determine if their courses are resulting in learning, and only 9% are working to determine if there are any changes in an employee's behavior as a result of the training (Van Buren & Erskine, 2002).

This, compounded with the cultural shift that, in some cases, truly requires employers to provide career development support to their employees, points to a great area of opportunity and improvement for many organizations today. According to a 1998

study conducted by Development Dimensions International, fewer than 30% of the 232 organizations polled offered career development training to their employees (Salopek, 1998). Given the data presented here, it will be imperative for organizational success in the future to not only offer, but also critically evaluate the programs that are rolled out to address these needs.

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Appendix A: Level 1 Instrument
(distributed on company letterhead)

{Date Distributed}

Dear Managing Personal Growth Participant,

In your pre-work you should have received the first of three assessments that are being conducted on the MPG process. As stated earlier, this is a study that will examine the effectiveness of the MPG training program. I am conducting this study through a partnership with company name removed, and in partial fulfillment of my master's degree program.

The second phase of this study can be found on the attached questionnaire. Would you please take a few moments to fill out the attached survey, **regardless of whether or not you filled out the previous questionnaire**. Remember to write your employee ID number on the bottom of this form and then return the whole packet to your instructor.

Please understand that your participation in this study is entirely voluntary and in no way will effect your completion of MPG. The results of this study may be published, but any information that could result in your identification will remain completely confidential. Your employee ID number will be used only to pair this survey with future parts of the study; once this pairing has been completed, your ID number will be separated from the questionnaire. Personal information, such as your name and other data, will not ever be used for this study.

If you have any questions about this study, I would be happy to speak with you. I can be reached at phone number removed or via Lotus Notes at "Laura K Tyzzer". You may also contact name and phone number removed or Dr. Howard Tokunaga at phone number removed. For further questions or complaints about the research, please contact the Academic Vice President of Graduate Studies and Research at San Jose State University, Dr. Serena Stanford, at 408-924-2480. Thank you very much for your support in this project. Within the next 2-3 weeks, you may be asked to volunteer for the last phase of the study by answering a few simple questions over the phone.

Sincerely,

Laura K. Tyzzer
Graduate Student Intern

Please write your employee ID number here: _____

MPG Course Evaluation

Instructor _____ ***Date*** _____

Please be sure to write your employee ID number on the attached page and turn in all pages to your MPG instructor. DO NOT SEPARATE THE PAGES!

Please answer the following questions by circling the answer that best describes how you feel about each item.

SD - Strongly Disagree
D - Disagree
N - Neither Agree nor Disagree
A - Agree
SA - Strongly Agree
N/A - Not Applicable

Instructor Quality:

The course objectives were well-communicated throughout the course.	SD	D	N	A	SA	N/A
The instructor's technical knowledge was appropriate.	SD	D	N	A	SA	N/A
The instructor used effective teaching skills.	SD	D	N	A	SA	N/A
Student involvement was encouraged by the instructor.	SD	D	N	A	SA	N/A
The instructor managed the class well.	SD	D	N	A	SA	N/A

Presentation Materials Quality:

The presentation materials were accurate.	SD	D	N	A	SA	N/A
The presentation materials were helpful.	SD	D	N	A	SA	N/A
The presentation materials were well designed.	SD	D	N	A	SA	N/A
The presentation materials complemented the course objectives.	SD	D	N	A	SA	N/A

Delivery Quality:

The course information was presented in a logical order.	SD	D	N	A	SA	N/A
The course delivery was interesting/engaging.	SD	D	N	A	SA	N/A

Overall:

This course was relevant to my work or personal development. SD D N A SA N/A

I would recommend this course to a co-worker. SD D N A SA N/A

I would take another course using this delivery method. SD D N A SA N/A

My primary motivation in coming to this course was:

1. ____ *I was interested in the topic*
2. ____ *It was suggested by my manager*
3. ____ *It was required by my manager*
4. ____ *To enhance my job skills*
5. ____ *Recommended by a co-worker*
6. ____ *Required to complete 40 hour company name training requirement*
7. ____ *Other* _____

Opportunities for Improvement:

What can we do to improve the course?

Are there elements that you did not like?

What parts of the course did you particularly enjoy?

Appendix B: Level 2 Pre-test Instrument
(sent on company letterhead)

{DATE SENT}

Dear Managing Personal Growth Participant,

I am a graduate student conducting a study that will examine the effectiveness of the Managing Personal Growth training program. This study is being conducted through a partnership with the Human Resources Development Institute and in partial fulfillment to receive my master's degree. Your input and the results of this study will help to guide HRDI in developing state of the art training for company name removed.

In order to assist with this effort, could you please spend a few minutes answering the attached ten questions? Please write your employee ID number at the bottom of this page, and bring the completed survey to the MPG class where it will be collected. **Please complete this survey before you begin your pre-work.**

Please understand that your participation in this study is entirely voluntary and in no way will effect your enrollment, participation, or learning in Managing Personal Growth. The results of this study may be published, but any information that could result in your identification will remain completely confidential. Your employee ID number will be used only to pair this survey with future parts of the study, with no association to your name. Once this pairing has been completed, your ID number will be separated from the questionnaire. Personal information, such as your name and other data, will not ever be used for this study.

If you have any questions about this study, I would be happy to speak with you. I can be reached at phone number removed or via Lotus Notes at "Laura K Tyzzer". You may also contact name and phone number removed or Dr. Howard Tokunaga at phone number removed. For further questions or complaints about the research, please contact the Academic Vice President of Graduate Studies and Research at San Jose State University, Dr. Serena Stanford, at 408-924-2480. Thank you very much for your support in this project.

Sincerely,

Laura K. Tyzzer
Graduate Student Intern

Please write your Employee ID number here: _____

MPG Course Baseline Survey

Please be sure to write your employee ID number on the attached page and turn in both pages to your MPG instructor. DO NOT SEPARATE THE PAGES!

Please answer the following questions to the best of your ability.

1. If you were asked to, could you identify what your top five values in life are in 10 seconds?

   _____Yes _____No

2. If you were asked to, could you identify 5 characteristics of your job that increase your job satisfaction in 10 seconds?

   _____Yes _____No

3. If you were asked to, could you identify one question that you should definitely ask on an informational interview in 5 seconds?

   ____ Yes _____No

4. Of the following, who do you feel is responsible for your career development? (choose all that apply)

   a) ____ Your manager
   b) ____ Your HR representative
   c) ____ You
   d) ____ company name removed
   e) ____ Your co-workers
   f) ____ Other _____

5. What is the best way to increase job satisfaction? (choose 2)

   a) ____ Get clear about what satisfies you
   b) ____ Update and circulate your resume
   c) ____ Communicate with your manager about your development plans
   d) ____ Accept all development opportunities that are offered to you
   e) ____ Discuss options with your co-workers
   f) ____ Investigate job opportunities

6. Where do you feel the best opportunities for leveraging your career development exist?

   a) ____ In another position at company name removed
   b) ____ In your manager's position
   c) ____ In your current job
   d) ____ At another company
   e) ____ In another industry
   f) ____ Other _____

7. Which of the following is the primary focus of Managing Personal Growth:

   a) ____ Identifying ways that your manager can improve your job
   b) ____ Taking responsibility for your own job satisfaction
   c) ____ Identifying other jobs where you would find more job satisfaction

please continue to the back side of the page ⇨

True or False?

8. A "performance priority" is an urgent request by your manager made on a specific day for a specific action.

____ True ____ False

9. A "critical skill" is a skill that you and your manager agree that you could improve.

____ True ____ False

10. A "development need" can also be a talent. ____ True ____ False

Background Information (Optional):

Please provide us with the following information so that we can better understand the students that take our courses.

1. Gender:____ M ____ F

2. Length of time at company name removed: _____ yrs. _____ mos.

3. Highest academic degree completed:

a) ____ Attended High School
b) ____ High School Diploma
c) ____ Vocational School
d) ____ Some College
e) ____ College Graduate
f) ____ Attended Graduate School
g) ____ MA/MS
h) ____ Ph.D.

4. Please indicate your employment status at company name removed:

____ Exempt Employee ____ Non-Exempt employee

On behalf of HRDI, I would like to thank you for your help with this project. Please remember to bring this form with your pre-work to your MPG class.

Appendix C: Level 2 Instrument with Correct Answers

1. If you were asked to, could you identify what your top five values in life are in 10 seconds?

__X__Yes _____No

2. If you were asked to, could you identify 5 characteristics of your job that increase your job satisfaction in 10 seconds?

__X__Yes _____No

3. If you were asked to, could you identify one question that you should definitely ask on an informational interview in 5 seconds?

__X__ Yes _____No

4. Of the following, who do you feel is responsible for your career development (choose all that apply)?

a) ____ Your manager
b) ____ Your HR representative
c) __X__ You
d) ____ Company name removed
e) ____ Your co-workers
f) ____ Other _____

5. What is the best way to become more satisfied in your job (choose 2)?

a) __X__ Get clear about what satisfies you
b) ____ Update and circulate your resume
c) __X__ Communicate your development plans with your manager
d) ____ Accept all development opportunities that are offered to you
e) ____ Discuss options with your co-workers
f) ____ Investigate job opportunities

6. Where do you feel the best opportunities for leveraging your career development exist?

a) ____ In another position at company name removed
b) ____ In your manager's position
c) __X__ In your current job
d) ____ At another company
e) ____ In another industry
f) ____ Other _____

7. Which of the following is the primary focus of Managing Personal Growth:
   a) ____ Identifying ways that your manager can improve your job
   b) _X_ Learning how to take responsibility for your own job satisfaction
   c) ____ Identifying other jobs where you would be more satisfied

True or False?

8. A "performance priority" is an urgent request by your manager made on a specific day for a specific action.

   ____ True __X__ False

9. A "critical skill" is a skill that you and your manager agree that you could improve.

   ____ True __X_ False

Appendix D: Level 3 Instrument
(sent via company email)

{DATE SENT}

Dear Managing Personal Growth Graduate,

I am a graduate student conducting a study that will examine the effectiveness of the Managing Personal Growth training program. This study is being conducted through a partnership with company name removed and in partial fulfillment to receive my master's degree. Your input and the results of this study will help to guide A company name removed in developing state of the art training for company name removed.

In order to assist in this effort, could you please spend a few minutes answering the attached questions? Please return this e-mail to me through Lotus Notes as soon as possible.

Please understand that your participation in this study is entirely voluntary and in no way will effect your employment or status at company name removed. The results of this study may be published, but any information that could result in your identification will remain completely confidential. Personal information, such as your name and other data, will not ever be used for this study.

If you have any questions about this study, I would be happy to speak with you. I can be reached at phone number removed or via Lotus Notes at "Laura K Tyzzer". You may also contact name and phone number removed or Dr. Howard Tokunaga at phone number removed. For further questions or complaints about the research, please contact the Academic Vice President of Graduate Studies and Research at San Jose State University, Dr. Serena Stanford, at 408-924-2480. Thank you very much for your support in this project.

Sincerely,

Laura K. Tyzzer
Graduate Student Intern

MPG Course Follow-Up

1. Are your performance priorities more clear than they were before MPG?

   Yes No

2. As a result of your development discussion, did you develop a plan to address your development needs?

   Yes No

3. Has that plan been carried out?

   Yes No

4. If not, why not:

   a) ____ I have a new manager now.
   b) ____ Switched jobs before it could be carried out.
   c) ____ Lack of support for plan from manager
   d) ____ Lack of support for plan from organization
   e) ____ Other _____

5. Have you been given a new assignment, project, or task to utilize your talents more?

   Yes No

6. If yes, has the utilization of your talents been on-going goal for you?

   Yes No

7. If yes, has the utilization of your talents been on-going goal for your manager?

   Yes No

8. Is your communication with your manager more frequent as a result of MPG?

   Yes No

9. How many development discussion follow-ups have you had with your manager since your initial Development Discussion?

0 1 2 3 4 5 6 7-8 9-10 11-12 >12

10. Is your communication with your manager more comfortable as a result of MPG?

Yes No

11. Are you motivated to make a greater contribution to company name removed as a result of your development discussion?

Yes No

12. Do you feel more satisfied with your job now?

Yes No

Circle the number that best indicates agreement with the statement.

11. The MPG training gave me the tools required to complete the Development Discussion successfully.

Strongly Disagree - 1 Disagree - 2 Neutral - 3 Agree - 4 Strongly Agree - 5

12. I am able to discuss specific areas of my development with my manager.

Strongly Disagree - 1 Disagree - 2 Neutral - 3 Agree - 4 Strongly Agree - 5

As a result of the Development Discussion(s):

13. I feel that my manager understands and supports my goals.

Strongly Disagree - 1 Disagree - 2 Neutral - 3 Agree - 4 Strongly Agree - 5

14. I have specific plans for increasing my satisfaction on the job.

Strongly Disagree - 1 Disagree - 2 Neutral - 3 Agree - 4 Strongly Agree - 5

Appendix E: Signed HSIRB Approval Form

San José State
UNIVERSITY

Office of the Academic Vice President
Associate Vice President Graduate Studies and Research
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Voice: 408-924-2480
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TO: Laura Tyzzer
2868 Aborn Rd.
San Jose, CA 95135

FROM: Serena W. Stanford Serena W. Stanford
AVP, Graduate Studies & Research

DATE: June 15, 1998

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Delivery Methods in Corporate Training"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Serena Stanford, Ph.D., immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.