THE IMPACT OF TRAINING ON EMPLOYEE ADVANCEMENT

Lori Bradley, B.S., M.A.

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APPROVED:

Linda L. Marshall, Major Professor
Paul L. Lambert, Committee Member
C. Edward Watkins, Committee Member
Vicki Campbell, Chair of the Department of Psychology
James D. Meernik, Acting Dean of the Toulouse Graduate School
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In recent years, organizations have invested increasing financial and labor-related resources on employee training. The assumption is that training will benefit the organization through improved performance which will result in greater efficiency, greater customer satisfaction and, ultimately, increased revenue and profits. Further, employees are assumed to benefit because their improved performance should lead to career advancement and increased compensation. However, measuring the effect of training on employee performance has been problematic due to the difficulty of isolating the effect of training from other human resource management practices and environmental and organizational influences. Hierarchical multiple regression analyses were used to test a model for predicting merit pay increase, job promotion and performance ratings from measures of general and finance training, as well as employee tenure, gender, educational level and organizational level. It was found that while significant contributions (i.e., betas) were made by finance and general training for performance ratings, promotion and merit pay increase, they did not increase the variance accounted for by tenure, organizational level and gender.
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THE IMPACT OF TRAINING ON EMPLOYEE ADVANCEMENT

In the context of rapidly changing markets, the development of “knowledge workers” within high-tech “knowledge societies” is occurring. In many industries, the nature of work has shifted from a need for manual labor. Information and knowledge are increasingly regarded as the primary resources necessary for organizational effectiveness. This has led to a demand for training that is developed quickly and delivered flexibly in work settings (Boud & Garrick, 1999). In the past, organizations considered training to be something that prepared people for employment or a particular job, whereas now training is considered to be something that should continue throughout tenure with the organization to keep pace with frequent and rapid changes in technology and work processes. Bova and Kroth (2001) argued that every worker, regardless of age, level of education or organizational tenure, needs retraining approximately every five years to keep abreast of changes in technology, organizational structures and work processes.

Training has been defined as a planned intervention that is designed to enhance individual job performance (Chiaburu & Tekleab, 2005). Training is driven by the identification and improvement of particular skills or the knowledge necessary to be successful in a particular job or job-related task. Decisions about training are usually made by leaders of an organization and job content experts. The targeted jobs or job-related tasks are linked to the achievement of an organization’s financial or operational goals. Training should help employees to better perform their work, as well as reduce the anxiety and frustration associated with unfamiliar work demands. Employees who feel less than competent to do a task may be more likely to leave a job or perform at
suboptimal levels. In contrast, Tsai and Wang (2007) found that employees who are committed to continual on-the-job learning showed high job satisfaction and that the training had a positive effect on their performance.

In recent years, organizations have invested increasing financial and labor-related resources on training for their employees. The assumption driving these investments is that training will benefit the organization in terms of improved employee performance resulting in higher efficiency, greater customer satisfaction and ultimately higher revenue and profits. Another assumption is that training will benefit the employee because improved job performance will lead to advancement opportunities and higher compensation. Although it is reasonable to assume that training would enhance work performance by individuals, the evidence for such a claim has not been well established. Some studies have supported these assertions (Bartel, 1994; Borman, 1991), with some exceptions (Broad & Newstom, 1992; Burke & Baldwin, 1999; Collins, 2002; Dionne, 1996; Kontoghiorghes, 2004; Rouiller & Goldstein, 1997).

The empirical relationship between training as a single human resource management (HRM) practice and employee performance, however intuitively compelling, is still considered questionable because of the relatively small number of studies conducted to test it (Harrison, 2000) and the numerous additional factors that can impact job performance ratings. Bartel (1994) found a positive relationship between implementing formal employee training programs and labor productivity in the manufacturing sector. Other organizational benefits reported in the literature included higher success rates in promoting employees, improved effectiveness of supervisors, better health-safety records and increased customer retention (Chaston, Badger &
Sadler-Smith, 1999; Rowden & Conine, 2005). Rowden (2002) proposed that training may be used as a tool to increase job satisfaction as well as job performance. Rowden and Conine (2005) argued that well-trained employees better satisfy the needs of their customers, which can contribute positively to the achievement of a company's financial goals. Guest (1997) theorized that training, along with other HRM practices, such as compensation, employee benefits and an organizational culture that promotes employee empowerment, can influence skills, knowledge, behavior and attitude of employees. Other studies have shown that training assists employees by increasing their skills (Gritz, 1993), wages (Mangum, Mangum & Hansen, 1990) and career advancement (Tharenou, 1997). A 2005 survey (Conference Board and the United States Department of Education) addressed the impact of training programs in private and public sector organizations. As a result of training, most employers reported improvement in at least one key workplace skill (e.g., ability to read) and one economic benefit. The majority also reported improvements in morale, increased quality of work, better team performance and improved capacity to solve problems. Most employers believed their employees were better able to cope with change as a result of the training. Unfortunately, the majority of studies address worker productivity or job satisfaction rather than actual performance outcomes (e.g., performance ratings, job promotions, merit pay increase).

Organizational leaders are increasingly concerned about the justification for investment in training (Clarke, 2004). Studies evaluating training interventions are problematic—some simply count the number of trainees completing classes or have participants report their perceptions about the training. Instead, studies should more
directly assess the organizational and individual impact of training (Phillips, 1998; Sadler-Smith, 1999). Unfortunately, comprehensive evaluation continues to be the most often ignored element of training system design (Geertshuis, Holmes, Geertshuis, Clancy & Bristol, 2002). The omission may result from a lack of time, resources or confidence in the training, or a lack of clarity about what should be measured (McCannon, Miller & Elfessi, 2004). Even the evaluations that are completed may not be well-designed or aligned with important elements or outcomes of the training. Therefore, the data may be misunderstood, misleading or misused, resulting in more harm than good from the evaluations (Bates, 1999; Combs & Falletta, 2000; Houlton, 1996; Pershing & Pershing, 2001).

The most commonly used model for evaluating training is Kirkpatrick’s model. This model proposes four levels of evaluation of training (Foshay, Kaufman, Leigh & Watkins, 1998; Kirkpatrick, 1983; Phillips, 1998; Swanson & Houlton, 1999). These levels are stakeholder perceptions or reactions to the training, knowledge gain, on-the-job performance improvement and organizational improvement. Phillips (1998) added return on investment to quantify training effectiveness in financial terms as a fifth level to the model. Trainee or stakeholder reactions (Level 1) provide useful insights into factors that contribute to learner motivation and satisfaction but do not directly measure training results. Identifying knowledge gain (Level 2) is useful to determine if the participant gained knowledge or skills as a result of the training. This is usually measured by administering a quiz during or immediately after the training. However, if knowledge gained from training is not adequately reinforced and used within a fairly short time period, it can quickly be lost, forgotten or not transferred to the job in a way that
improves performance (Broad & Newstom, 1992; Burke & Baldwin, 1999; Kontogiorghes, 2004; Rouiller & Goldstein, 1997). Therefore, learning measures taken during or shortly after the training do not provide adequate evidence of training’s long-term value to the organization (Collins, 2002; Dionne, 1996). Measures of improved organizational performance (Level 4) are viewed by many as equal to or more important than individuals’ work performance (Level 3). But there are problems with both of these measures. It is difficult to isolate a training effect for improved employee performance, and other variables in addition to the effectiveness of training may account for changes in organizational performance (Bates, 1999; Collins, 2002). These might include increased competition from a rival company, tighter regulatory standards, departure of key organizational leaders, and a host of other things. The remainder of this section describes the variables examined in this study and relevant research pertaining to each of them.

Education, Tenure and Gender

The study considered the demographic variables organizational tenure (how long an employee has been with the company), educational level (the highest level of schooling completed) and gender. These variables have been found in other studies to explain some of the variance in employee performance ratings (e.g., Borman, 1991; Judge & Ferris, 1993; Miron, Erez & Naveh, 2004; Moser, Schuler & Funke, 1999; Motowidlo & Van Scotter, 1994; Posthuma, 2000; Schmidt, Hunter & Outerbridge, 1986; Sundvik & Lindeman, 1998a; Sundvik & Lindeman, 1998b; Van Scotter, Motowidlo & Cross, 2000).
According to a study by the Bureau of Labor Statistics (1996), those with greater educational attainment and higher aptitudes were more likely than others to spend time in learning activities due to changes in the workplace. Education and aptitude have been directly correlated with participation in classes/seminars, self-study, and other forms of learning. This may indicate that those with more education hold jobs with greater complexity where these forms of learning are prevalent. Additionally, those who invest more heavily in formal education may also be more willing to take classes and/or undertake self-study when beginning a new job or facing the need to gain new skills.

Tenure may contribute to an employee’s pay because raises compound over time. As a result, pay level effects can be confounded with organizational tenure (Gardner, Van Dyne & Pierce, 2004). It was expected that tenure would have an effect on merit-based pay increases and job promotion. It was also expected that tenure would be associated with employee performance ratings. Although no studies were found to support this, it was assumed that the experience gained across time in a particular job or with a particular organization contribute to increased job performance.

The role of gender in career advancement has been studied by a broad array of researchers and has been of particular interest to public companies, given their implied dedication to gender parity as stated by their commitment to equal employment opportunities. Chen, Roy, and Crawford (2010) examined the role of gender in career advancement at the Centers for Disease Control (CDC) and found that the gender gap in promotion within the CDC's workforce has, in fact, been diminishing over the past decade, but a significant gap still exists. The researchers explained this diminishing gap as a result of improvements in education and experience in the female employees at the...
CDC. Using logistic regression, the researchers found that a gender gap remained in terms of the probability of promotion to mid-level position within the CDC, with the odds of promotion being 22.5% higher for men than for women in 2006, which was a reduction from the 39.2% difference in odds they found in 2003. However, promotion to the higher job grades depended primarily on educational attainment rather than gender. Regarding gender differences in pay, Blau and Kahn (2007) reported that women continue to earn considerably less than men on average and that the gradual convergence that seemed to be taking place in the 1980s slowed considerably in the 1990s. Despite a slight increase in the narrowing of the gap in the early 2000s, the researchers highlight the possibility that with a current challenging and uncertain economy, the narrowing of the gender pay gap may not continue into the future. Other researchers (Lowen & Sicilian, 2009) have investigated if the gender wage gap is explained by gender occupational segregation, meaning that gender differences in occupational preferences or abilities explain the difference in pay. According to these hypotheses, women may prefer jobs that provide more "family-friendly" fringe benefits, such as reduced work schedules or more flexible hours, and that the jobs more typically associated with these benefits tend to offer lower salaries. Lowen and Sicilian (2009) found no evidence that the differences in fringe benefits explain the gender wage gap. It was appropriate to look at gender in the current study through this lens, however, because the population for the current study was made up of corporate finance professionals, an occupational group that has historically in the United States been dominated by males. Societal changes during the past decades have led to more women achieving higher levels of education and higher rates of entry into professions
historically dominated by men (Carter & Silva, 2010; Igbaria & Jack, 1995; Kacmar & Ferris, 1993; Metz, 2009; O’Neil, Hopkins & Bilimoria, 2008), so it would be expected that the study results would not indicate a gender difference on merit pay or promotion.

Training

Unfortunately, most research to date on the effects of training has looked at worker productivity or job satisfaction ratings rather than actual performance outcomes to indicate improved job performance. Many of the studies use self-report survey data to reach conclusions rather than some objective measure of employee performance. This study looked at employee performance ratings, job promotions and merit-based pay increases to indicate training effectiveness. It was expected that training would be positively correlated with performance ratings, job promotion and merit pay increase. In other words, as one took more training, one’s performance ratings, occurrence of job promotion and cumulative pay increases would be higher.

Employee Performance

It would seem logical to use employee performance ratings as an outcome measure when studying the efficacy of a training program, which was designed to enhance employee performance. Doing so is challenging, however, due to the way that employee performance is typically measured in organizations. Usually, a manager sets various performance goals and objectives with an employee early in the year (e.g., sales targets of a specific dollar amount, customer service ratings in a specific range) then the manager evaluates the employee annually based on achievement of those
objectives. A numerical rating scale is usually used to assess the degree to which the employee met the objectives. There is often a lack of consistency across managers in the specific objectives that are set and how the rating scale is calibrated among managers, which makes performance ratings highly variable and unreliable in empirical studies. An additional problem is that managers are often instructed to ensure a specific percentage of employees fall in the lowest, middle and highest sections of the rating distribution. For example, it is not uncommon for managers to be instructed that only 10% of their employees can be given ratings in the top and bottom levels of the distribution and the remaining should all fall in the mid-range. Consequently, annual employee performance ratings are problematic in empirical studies and must be considered with caution. Despite these problems, many in the human resources professional community believe that employee performance ratings are valuable in guiding employee development effort and providing documentation in termination cases, and are fundamental to evaluating training programs (Carson, Cardy & Dobbins, 1992). However, the utility of using employee performance ratings as outcome measures to indicate the effect of training on employee performance may be limited. For this reason, this study will use the additional outcome measures of merit-pay increase and job promotion to evaluate the impact of training.

**Merit-Based Pay Increase**

Merit-based pay increase is the annual increase in salary that is awarded based on an employee’s performance. No studies were located that investigated the effect of training or performance rating on an employee’s merit-based pay increase. However,
Gardner, Van Dyne and Pierce (2004) examined the motivational effects of pay on employee performance. After controlling for organization tenure and previous pay change, they identified a mediated model in which pay affected employee self-esteem, which in turn affected performance. In a study of employees' reactions to pay raises, Folger and Konovsky (1989) found a strong positive relationship with perceptions of distributive justice and pay-raise satisfaction. In a study of pay-system reactions, Miceli, Jung, Near and Greenberger (1991) used structural equation modeling to test several hypotheses regarding reactions to pay-for-performance plans. They found that reactions to the pay system were related to (a) the extent to which rewards were consistently distributed, and (b) participants' perceptions that they fared better under a pay-for-performance system than a seniority-based pay system. Thus, their study concluded that the basis used to determine pay raises affected reactions to pay. These studies, however, did not look at merit-based pay increase as a function of employee performance.

Another study, Regner (1994), focused on merit pay and found no substantial effects of training on wages. For this study, data for merit-based pay increase were obtained across four years in order to examine if there is a difference in merit pay for those who have taken more general and finance training. It was expected that those who had taken higher amounts of training would receive higher merit-pay increases.

**Promotion**

Based on the assumption that employees who have higher performance ratings are more likely to receive job promotions and pay increases, the relationships between
training, performance ratings and job promotion were tested. The purpose of this
analysis was to ascertain if an increase in training hours was correlated with an
increase in performance ratings and job promotions.

In light of the inherent challenges in researching the effect of training, this study
considered specifically how training impacts employee advancement by using
hierarchical multiple regression and logistic regression to investigate the relationships
between general and job-specific (finance) training and the variables merit pay increase,
job promotion, performance rating, education, tenure, gender and organizational level.
The associations between the variables was empirically examined to answer five
important questions: (1) is performance rating affected by hours of general training,
hours of finance training, tenure, education, gender or organizational level; (2) is merit
pay increase affected by hours of general training, hours of finance training, tenure,
education, gender, promotion or organizational level; (3) is job promotion affected by
hours of general training, hours of finance training, tenure, education, gender,
performance rating or organizational level; (4) is the amount of general training that a
person takes affected by tenure, education, gender, organizational level, performance
rating or promotion; and, (5) is the amount of finance training that a person takes
affected by tenure, education, gender, organizational level, performance rating or
promotion?
METHODS

Sample

Archival data from a defense and aerospace company (hereinafter “the Company”) was used in this study. The sample was geographically dispersed across 18 states. The data collected consisted of 3,377 employees in the Company’s finance department. Of the subjects, 1,468 (51.8%) were male, 1,364 (48.2%) were female. Gender was not available for 545 individuals. The age of participants ranged from 22 to 74, with a mean age of 44.5 years ($SD = 10.60$). Age data were not available for 16 subjects. Education ranged from high school graduate (4%) to doctorate (0.1%). Some college courses were taken by 5%, 2.5% had an associate’s degree, 47% had a bachelor’s degree and 19% had a master’s degree. Participants had been with the company an average of 14.65 years ($SD = 10.82$), with a range from 7 months to 49 years. For the four years of the study, the amount of finance training ranged from 0 hours to 85 hours per person, with a mean of 15.79 hours ($SD = 12.88$) per person. General training hours ranged from 1.5 to 539 hours with a mean of 64.58 ($SD = 43.30$). The mean organizational level for 2003 was 3.56 ($SD = 3.77$). Of the total subjects, 56.7% had not received a promotion during the time period of the study and 43.3% of subjects did receive a promotion.

Procedure

The Company uses an on-line web-based portal to assist employees in finding and enrolling in training courses. This portal also tracks course enrollments and completions, maintaining a transcript for each employee. In addition, various
communication methods including memos, flyers and demonstrations have been used by the Company to raise employees’ awareness of the existence and availability of the courses. Courses are available to all finance employees who are able to enroll in and attend the courses, with their manager’s approval, during work hours for no cost. Some of the courses qualify for Continuing Professional Education unit credits as required by the National Association of State Boards of Accounting.

The courses were created by the Company’s training and development department, which is one function of the human resources department. The Company is interested to know if these courses are having a positive effect on employee performance and if it should continue to make the substantial investment in developing and offering them. The courses were made available starting in 2004.

After obtaining approval from the organizational sponsors of the study to use the archival data, data were collected in late 2006 by a member of the organization’s human resources department and made available to the researcher for the purposes of this study. The names, employee numbers and any identifying information were removed from the data before being given to the researcher to ensure the anonymity of the subjects.

Measures

The data for this study was obtained from the Company’s human resources information system (HRIS). The HRIS contains performance and salary data on every employee. It also contains demographic data. The Company maintains a separate database for each employee in which number of hours of training and employee
transcripts are tracked. The executive vice president of human resources provided permission for these data to be collected for the purposes of this study. Another human resources employee retrieved the data from the two systems and removed all names to ensure confidentiality. The data were provided to the researcher in a Microsoft™ Excel™ spreadsheet.

Descriptive Variables

Data on company tenure, education and gender have been collected. Tenure is the number of years the employee has been with the Company, not necessarily in the finance department. Data on finance-specific tenure were not available. Tenure is a continuous variable and was coded as number of years. Education is coded into categories (1 = high school graduate, 2 = some college/associate's degree, 3 = bachelor's degree/some graduate school, 4 = master's degree). Although data was available for those who had attended some high school and for those who had a doctoral degree, these data only represented six subjects and so these subjects were dropped from the study.

Training

For each employee, data exist on the total number of general and finance training hours and the number of general and finance training courses he or she completed in 2004 and 2005. It was decided to use cumulative hours as the study variable rather than the sum of courses due to the variability of courses, which ranged from a 30-minute web-delivered training course to a 2-day instructor-led course.
General training courses address skills in areas such as computer usage, interpersonal interaction and communication. Courses vary in length from 30 minutes to several hours in duration. Finance-specific courses were developed and taught by finance professionals employed by the Company, addressing such topics as financial planning and analysis, forecasting, general accounting, internal audit, cost accounting, project management and earned value management. The courses were available to all employees in the finance department, who enrolled via the Company’s learning management system, which tracked enrollment and completion. Enrollment usually required a manager’s approval, suggesting the topics were viewed as addressing a development need. The data obtained were the total number of finance hours taken by each individual and the total of all training taken by each individual. To create the general training variable, the sum of the finance hours taken was subtracted from the sum of all training taken for the years 2004 and 2005.

Performance Rating

Annual performance ratings were collected for each participant for the years 2003, 2004, 2005 and 2006. These ratings are assigned as part of the Company’s yearly performance review process. Company managers assign a numerical rating to evaluate the employee’s job performance, ranging from 1 to 4 with labels for (1) needs improvement, (2) meets expectations, (3) exceeds expectations and (4) far exceeds expectations. Managers are given behavioral anchors to assist in calibration of ratings across managers, but are sometimes instructed to rate no more than 10% of their employees as a 4. This restriction is a key contributing factor to the problematic nature
of using annual performance ratings as accurate measures of employee performance and is a key reason to seek alternative measures of training effectiveness, which in this study was merit-based pay increase and job promotion. Performance ratings were obtained and averaged across the four years to create the study variable.

Annual Merit Pay Increase

An employee’s salary is evaluated and adjusted on an annual basis by his or her manager. Managers are instructed to base their salary adjustments on the employee’s performance during the preceding year. Merit pay increase data have been collected for fiscal years 2003 through 2006 and is expressed as a percentage increase. For example, if an employee’s 2003 salary was $100,000.00 with a merit increase of 5%, the 2004 salary would be $105,000.00. Although merit increases are limited by annual budget numbers, they do not have the same restrictions or forced distributions that performance ratings have in the Company, which may make them more valuable in providing evidence of true job performance.

Promotions

Changes in organizational level were coded to create the promotion variable for this study. The organizational level of each employee was obtained for 2003, 2004, 2005 and 2006. The Company classifies jobs into a job-grade structure of various levels ranging from 1-11. Employee Level 1 is considered an entry position that is primarily administrative, has no managerial responsibility and has the lowest annual salary. Levels 2 through 5 represent increasing responsibility, but usually without managerial
responsibility. Level 6 and 7 employees are titled as managers with project management responsibilities who may or may not have supervisory responsibility over other employees. Level 8 employees are senior managers and usually have others who directly report to them. Titles for Employee Level 8 is director, Level 9 is senior director, Level 10 is vice president and Level 11 is senior vice president. As the level increases, compensation and benefits packages (e.g., car allowances, tax preparation and financial planning, annual medical examinations at an elite medical institution, and first class travel accommodations) increase. Promotion is indicated by moving up numerically in organizational levels. For this study I looked only at employees in Levels 1 through 7. The rationale for dropping those employees above Level 7 is based on the observation that these higher level employees take fewer training courses throughout the year and were not the target audience for the training initiative in this population. Also, at the higher levels, promotions are less frequent.
RESULTS

Data Preparation

In order to process and organize the data, the Microsoft™ Excel™ spreadsheet with data supplied by the organization was imported into PASW version 18 and a database was created. For each employee, data were coded numerically.

A number of the original participants were deleted from the data set. Those participants with less than a high school education \((n = 3)\) and those with doctorate level education \((n = 6)\) were deleted due to the very small numbers. Participants who were in organizational levels higher than 8 (director level) were also eliminated \((n = 60)\). Their promotions would be less likely than for lower level employees because there are fewer positions available and employees tend to stay in those jobs longer. In addition, higher level employees were in managerial-type positions and, as such, were not the primary targets of this training initiative. Finally individuals who did not have an organization level for 2003, indicating they were not with the organization in the first year of the study, were dropped \((n = 978)\). Additional deletions were made due to missing data. In the entire sample 545 were missing data for gender, 726 were missing data for education level, 684 were missing data for tenure, 478 were missing data for promotion, 746 participants were missing performance rating data, and merit pay increase was not available for 713 participants. This resulted in the deletion of 1,229 participants, decreasing the sample from 3,377 to 2,148 participants.

Table 1 provides a comparison of participants dropped for each variable to the sample with complete data. A series of ANOVAs were used to identify differences and all were significant. Pairwise deletion was used due to the small \(n\) that would have
resulted with listwise deletion. Due to dropping participants missing organizational level in 2003, the remaining participants had a mean of 16.78 years of tenure compared to 7.96 years for those dropped from the sample. Organizational level for those included in the study (M = 3.35) was lower than for those excluded (M = 5.36) as a function of limiting the study to organizational levels below 8. Although the ANOVA showed a significant difference in performance rating for those included and not included in the analysis, the means of these two groups were actually very close to one another (M = 2.51 for the entire sample and M = 2.60 for those included in the study). The significant F value in the ANOVA was likely due to the large sample size. The mean number of general training hours taken was higher for those included in the study (M = 67.70) than for those not included (M = 59.14). For finance training the sample included in the study had taken more finance training (M = 16.40) than those excluded (M = 14.72). Merit pay increase, expressed as a percentage of base salary, was also significantly higher in the participants included in the sample (M = 22.30%) than for the excluded group (M = 12.10%). This was most likely due to the fact that those in higher levels who receive smaller percentage increases (due to their already higher base salaries) were dropped from the study.

Chi square analyses were conducted for categorical variables to examine differences between those included and excluded in the analysis. Those included in the analysis were more likely to have received a promotion (43.3%) than those excluded (27.5%), $\chi^2(1, n = 2901) = 58.774, p < .001$. This supports the rationale to limit the sample to those below organizational Level 8 because fewer promotions would be likely at the higher levels of the organization. Finally, there was no gender difference found in
the group excluded from the analysis (50.9% male and 49.1% female) and the group included (52.1% male and 47.9% female), $\chi^2(1, N = 2832) = .332$, ns.

The data were assessed for normality by looking at the frequency distribution and by examining critical skewness and kurtosis values. For skewness no variables exceeded the commonly used cut-off value of 2. For kurtosis, no variables exceeded the commonly used cut-off value of 10. Therefore the data were determined to be normal.

Interaction variables were created to see whether other independent variables interacted with either training variable to make a significant contribution. Thus, gender, promotion, education, tenure, performance rating, merit pay increase and organizational level were multiplied by general training and by finance training to create the interactions. In order to create interpretable interaction terms and to reduce the risk of multicollinearity, the data were centered and the mean was reset to 0 by subtracting the grand mean from the variable.

Table 2 provides descriptive statistics, including the range, mean and standard deviation, for the continuous variables included in final analyses. The maximum value (539) for general training was very high and was likely for individuals who were participants in the Company’s intensive leadership development program. Participants in this program attended two-week long sessions twice per year for the duration of the program. Because it was determined that these values were not coding errors, it was decided to keep them in the sample. An explanation may be needed, as well, for why merit pay increase would have negative percentage increases. These cases represent a participant who has been demoted or has taken a job with a lower salary. The negative value on merit pay indicates that their salary is being adjusted down for the new
position. Again, since this is valid data and not a coding error, these participants were included in the sample.

Table 3 provides the results of bivariate correlations among the study variables. The results showed that multicollinearity among the variables would not be a problem because no correlations above .44 were found. Performance, promotion and tenure had the most significant relationships with other variables. For the training variables, the bivariate correlations showed that with increasing education, hours of finance training increased and there was a negative correlation between finance training hours and organizational level, which indicates that those in higher level positions take less finance training. For general training, there were significant positive correlations with performance rating, merit pay increase and promotion, indicating that with increases in general training, performance rating, merit pay and promotions also increased.

Research Questions

To address the research questions identifying the relationship of training to the dependent variables, five regression analyses were conducted. Hierarchical linear regression procedures were used with all but Research Question 3 (RQ3), for which a logistic regression equation was calculated. Results for each research question are addressed separately.

Research Question 1: Is employee performance rating affected by hours of general training, hours of finance training, tenure, education level, gender, organizational level and whether the employee had been recently promoted?

For the hierarchical multiple regression to address research question 1 (RQ1),
the first step contained promotion and 2003 organizational level. The second step contained gender, education and tenure. The third step contained general and finance training hours. In the fourth step, interactions with the training variables were entered.

As shown in Table 4, the significance of the betas for promotion, 2003 organizational level, tenure and gender remained consistent across each of the models tested. Education, however, was not significant beyond Step 2. Furthermore, the $F$ tests were significant at each step in the linear regression analysis: Step 1, $R = .52$, $F(2, 2147) = 386.91$, $p < .001$; Step 2, $R = .55$, $F(5, 2142) = 183.22$, $p < .001$; Step 3, $R = .55$, $F(7,2147) = 131.49$, $p < .001$; Step 4, $R = .55$, $F(17,2147) = 54.95$, $p < .001$. However, succeeding steps resulted in a significant change in variance accounted for only at Steps 1 and 2. A minor but non-significant change in $R^2$ occurred after Step 1, increasing the variance accounted for from 26% to 30%, a small but significant difference.

The first step, containing promotion and organizational level, accounted for 26.4% of the variance in employee performance ratings. Both promotion, $\beta = .408$, $p < .001$, and organizational level, $\beta = .428$, $p < .001$, made significant contributions. In Step 2, entry of tenure, education and gender accounted for an additional 3.4% of the variance, $\Delta F(3,2142) = 35.119$, $p < .001$. Significant contributions were made by shorter tenure, $\beta = -.134$, $p < .001$ and female gender, $\beta = -.145$, $p < .001$. In Step 3, adding finance and general training measures did not add a significant amount of variance to the model, $\Delta F(2,2140) = 1.804$, ns, with neither variable making a significant contribution. In Step 4 the interaction terms did not add to the variance accounted for, $\Delta R^2 = .004$, $\Delta F(12, 2130) = 1.26$, ns. The conclusion drawn from this
analysis is that when recent promotion, organizational level, tenure and gender are controlled for, training was unrelated to employee performance ratings.

Research Question 2: Is merit pay increase affected by hours of general training, hours of finance training, tenure, education level, gender, promotion or organizational level?

For the hierarchical multiple regression addressing merit pay increases, the first step contained performance rating and promotion. The second step contained gender, education and tenure. The third step contained general and finance training hours. In the fourth step, the interactions with training were entered.

As shown in Table 5, the significance of the betas for performance, promotion, gender and tenure remained consistent across each of the models tested. Education, however, was never significant. $F$ tests were significant for each step in the linear regression analysis: Step 1, $R = .53, F(2, 2145) = 411.64, p < .001$; Step 2, $R = .54, F(3, 2142) = 173.46, p < .001$; Step 3, $R = .54, F(2,2140) = 124.11, p < .001$; Step 4, $R = .54, F(12,2148) = 45.85, p < .001$. Only a minor but significant change in $R^2$ occurred at Step 2, increasing the variance accounted for by less than 1% from 27.7% to 28.4%.

In the hierarchical regression, the first step containing measures of performance and promotion accounted for 27.7% of the variance in merit pay increase. Both performance, $\beta = .311, p < .001$, and promotion, $\beta = .340, p < .001$, were significant predictors. In Step 2, tenure, education and gender accounted for an additional 1.1% of the variance, $\Delta R^2 = .002, \Delta F(3,2142) = 10.878, p < .001$. Significant contributions were made by shorter tenure, $\beta = -.087, p < .001$ and female gender, $\beta = -.048, p < .05$. In Step 3, adding finance and general training measures did not add to the model, $\Delta F(2,2140) = 0.802, ns$, with neither variable making a significant contribution. In Step 4
the interaction terms only accounted for an additional .2% of variance, $\Delta R^2 = .002$, $\Delta F (12, 2128) = 0.43$, ns. The conclusion drawn from this analysis is that when recent promotion, performance rating, tenure and gender are controlled for, training was unrelated to merit pay increase.

Research Question 3: Is job promotion affected by hours of general training, hours of finance training, tenure, education, gender, performance rating or organizational level?

Promotion was a dichotomous variable so a logistic regression analysis was performed. Performance was entered in Step 1. Tenure, education, gender and organizational level were entered in Step 2. General training and finance training were entered in Step 3, and a series of interaction terms were entered in Step 4.

The final equation was a good fit to the data as indicated by the Hosmer and Lemeshow test, $\chi^2 (8, N = 2148) = 7.281$, ns. As shown in Table 6, performance in Step 1 was a significant predictor of job promotion, $OR = 3.422$, $p < .001$. Nagelkerke’s $R^2$ showed 12.3% of variance in promotion was explained and 61.2% of cases were correctly classified at Step 1, compared to the 56.7% correctly classified in the null model. A one unit increase in performance rating increased the odds of promotion by 242%.

Entering tenure, education, 2003 organization level and gender at Step 2 increased the explained variance to 33.2% and correct classification to 72.3% of cases. All predictors except education were significant at this step. Based on the odds ratio value, a one-unit increase in tenure was associated with a 3% decrease in likelihood of promotion. A one-unit increase in organizational level is associated with a 48% decrease in likelihood of promotion, so higher organizational level and longer tenure
were associated with fewer promotions. Males also received fewer promotions than females.

When finance training and general training were entered at Step 3, explained variance increased only to 34.3% and correct classification increased slightly to 73.3% of cases. Of the two training variables, only general training was significant, $OR = 1.006$, $p < .001$. A one-unit increase in general training hours only resulted in a less than 1% increase in promotion.

When the interactions were added in Step 4, explained variance increased to 35.1%, but the correctly classified cases decreased to 72.8% from the 73.3% found in Step 3. Of all the interactions, only finance training by tenure was a significant predictor at this step, $OR = 0.999$, $p < .05$.

The conclusion from this analysis is that better performance is associated with greater instances of job promotion. There was a negative relationship for both tenure and organizational level indicating that promotions were less likely as tenure and organizational levels increased. General training was significantly associated with being promoted, although the effect was too small to be meaningful and probably would not have real-world implications. Finance training was not associated with being promoted. Males in this sample received fewer promotions than females.

Research Question 4: Is the amount of general training that a person takes affected by tenure, education, gender, organizational level, performance rating, or promotion?

For exploratory purposes, it was useful to try to determine which variables were related to employees taking training. For this hierarchical multiple regression to account for general training, the first step contained gender, tenure and education. The second
step contained performance, promotion and 2003 organizational level. In the third step the interactions were entered. Results are included in Table 7.

The $F$ test in the first step was not significant in the linear regression analysis: Step 1, $R = .05$, $F(3, 2144) = 1.75$, ns. However $F$ tests were significant in Steps 2 and 3: Step 2, $R = .13$, $F(3, 2141) = 5.92$, $p < .001$; Step 3, $R = .18$, $F(8,2133) = 5.16$, $p < .001$. The total variance accounted for by the overall model was 2.6%. In Step 2, entry of promotion, 2003 organizational level and performance accounted for an additional 1.4% of the variance, $\Delta F (3,2141) = 10.06$, $p < .001$. A significant contributions was made by recent promotions, $\beta = .120$, $p < .001$. Longer tenure was also still significant at this step, $\beta = .065$, $p < .01$. In Step 4 the interaction terms accounted for an additional 1.6% of variance, $\Delta R^2 = .016$, $\Delta F (8, 2133) = 4.53$, $p < .001$. In the final model, significant contributions were made by longer tenure, $\beta = .064$, $p < .05$, recent promotions, $\beta = .119$, $p < .001$, female gender, $\beta = -.048$, $p < .05$, and the interaction of gender with 2003 organizational level, $\beta = -.085$, $p < .01$, and with performance rating, $\beta = -.055$, $p < .05$; however the betas were very small and explained only a small amount of total variance. The conclusions drawn from this analysis is that for the subjects in this study—being female, having longer tenure and being recently promoted—were associated with enrollment in more general training hours. While performance and organizational level on their own were not significant predictors, the interaction terms with gender for these two variables were significant, although accounted for a small amount of variance.
Research Question 5: Is the amount of finance training that a person takes affected by tenure, education, gender, organizational level, performance rating or promotion?

For this hierarchical multiple regression to determine which variables were related to employees taking finance training, the first step contained gender, tenure and education. The second step contained performance, promotion and 2003 organizational level. In the third step the interactions were entered.

As Table 8 shows, the $F$ tests were significant in each step of the linear regression analysis: Step 1, $R = .10, F(3, 2144) = 7.12, p < .001$; Step 2, $R = .12, F(6, 2141) = 5.56, p < .001$; Step 3, $R = .15, F(14, 2133) = 3.68, p < .001$. Although significant, the associations were quite weak, accounting for merely 1.7% of the variance.

The first step, containing education, tenure and gender, accounted for only 0.8% of the variance in finance training, with the betas for education, $\beta = .084, p < .001$, and for gender, $\beta = -.068, p < .01$, reaching significance. In Step 2, entry of promotion, 2003 organizational level and performance accounted for an additional 0.5% of the variance, $\Delta F (3,2141) = 3.98, p < .01$. Significant contributions were made by higher education, $\beta = .106, p < .001$, female gender, $\beta = -.050, p < .05$, and lower organizational level, $\beta = -.099, p < .01$. In Step 3 the interaction terms accounted for an additional 0.8% of variance, $\Delta R^2 = .08, \Delta F (8, 2133) = 2.25, p < .05$. At this step, significant contributions were made by education, $\beta = .124, p < .001$, gender, $\beta = -.057, p < .05$, 2003 organizational level, $\beta = -.085, p < .01$, and the interaction gender by tenure, $\beta = -.061, p < .05$. These findings suggest that the impetus for taking finance training may also differ for males and females, while statistically significant there are few real-world implications since amount of variance accounted for is very small. In this equation,
training and a recent promotion were associated. The conclusions drawn from this analysis is that for the subjects in this study, being female, more highly educated and at a lower organizational level was associated with enrollment in more finance training hours. While tenure on its own was not significantly associated with taking more finance training, the interaction of gender and tenure was significantly associated with taking more finance training.
DISCUSSION

The purpose of this study was to see if training, either general training or occupationally specific (in this case, finance) training, was associated with advancement in organizations. Employee performance ratings, merit pay increases and whether or not an employee was promoted during the time period were the measures of advancement. This study was conducted with employees of one large U.S. company that had a major initiative for training. Consequently, unlike many studies, the results have immediate implications. Unfortunately, training was shown to be less important to employee advancement than other factors.

Company leaders and human resource professionals would like to believe that by providing on-going training to employees there will be a beneficial result in employee productivity and work performance. In turn, those gains are expected to translate into increased revenue for the company, enhanced worker satisfaction and higher employee retention, all of which enhance the company’s bottom line—profitability. By collecting data on the finance employees who had participated in general and/or finance training over a period of two years, this study investigated the association of training with several variables important to the employees themselves. Additionally, exploratory analyses were conducted to identify variables related to employees taking training offered by companies.

This research did not find that taking either general training or finance training was associated with a change in employee performance rating, merit pay increase or being promoted in this population. Instead, education level, gender, tenure and organizational level contributed to the amount of training taken by employees during the
time period. For merit pay, this is counter to the findings of Veum (1995), who used data from the National Longitudinal Survey of Youth from 1986 to 1990, to investigate the impact of training programs. Veum found that training was positively related to the amount of employees’ wages as well as to changes in wages between 1986 and 1990.

This study did not find a meaningful relationship between training and performance ratings, in contrast to other studies (Barrett & O’Connell, 2001; Holzer, 1993). The difference in this study may stem from the fact that many previous studies used survey data rather than actual performance ratings. Based on the way the questions were worded, there may be a halo effect for training. For example, the question, “Did the recent training improve the employee’s performance?” might be answered in the affirmative based on the desire for the training to have impacted performance, or the logic that it “should” have impacted performance, rather than actual empirical evidence that performance was enhanced. A question worded like this also does not indicate in what ways the training improved the employee’s performance. Many of the studies that found a positive effect of training were in the manufacturing industry and addressed perceived worker productivity (Barrett & O’Connell, 2001; Holzer, 1993) as an indication of improved performance. For knowledge workers, such as the finance employees in this study, productivity is neither easily measured, nor is it necessarily an appropriate outcome measure. Accuracy or error rate might be a more meaningful measure, but those data would be extremely difficult to obtain because organizations would be unlikely to reveal errors in accounting systems or financial reports.
There are several other possible reasons that training was less important to employee advancement than expected. The training may have been poorly designed or poorly delivered. Those who developed the training were internal instructional design experts who utilized internal subject matter experts to create the courses. The topics selected were based on the needs identified through surveys, focus groups and by studying how market competitors were training their finance employees. Since this is the commonly accepted best practice in training design (Tracey, 2009), the likelihood of poor design or content is fairly low. Leaders in the Company’s finance division delivered the training. Although these individuals had subject matter expertise, it is not known if they had any particular skill in course delivery or group facilitation. Thus, it could be the case that the facilitators were not effective in delivering the training.

Another possibility is that training may not be very important for this type of occupational group. To be hired into a finance position usually requires a bachelor’s degree in finance or a related field. It may be the case that formal education forms the basis of the skill set required for job performance for finance professionals. Consequently, employees enter the job already possessing most of the skills or knowledge that could be acquired through the training that was offered. This possibility is supported by the fact that education was positively correlated with performance rating, however it was not significantly correlated with merit pay increase or promotions in bivariate correlations and it did not account for a significant percent of variance in the regression equations.

The company, rather than the individual, may receive the primary benefit of the types of training offered by this company, in terms of process consistency and
government compliance. Since the work of a finance professional in a corporate role is primarily knowledge work (for example, analysis, planning, preparation of reports) rather than production of goods or provision of a service that requires physical or interactional skills, it may be that function-specific training is more of a refresher than an opportunity to acquire a new skill. This may explain why general training had more of an impact on career advancement for financial professionals in this study than finance-specific training in Research Question 3 when finance training and general training were entered into the model at Step 3. Of the two training variables, only general training was significant; however, a one-unit increase in general training hours only resulted in a less than 1% increase in promotion so the real-life impact would be very small. The slight advantage of general training may be because the leadership and interactions skills that were acquired through the general training courses were more supportive of the key differentiators in career advancement. The finance-specific knowledge is considered a given and the skills that would distinguish high performance lay outside of the function-specific knowledge and more in the area of leadership ability, strong communication skills or well-developed interpersonal or political savvy.

Although training did not emerge as having an influence on performance ratings, merit increases and job promotion, some of the descriptive measures were associated. Females and shorter tenure were associated with higher performance ratings and merit pay increases. There was not a gender difference in promotions, however. While on the surface this would appear to be a good thing most likely driven by the heightened focus on real and perceived gender inequality in corporations today, it does beg the question
of why, when they are receiving higher performance ratings, are females not also being promoted at a higher rate rather than at an equal rate with men.

In the current study education was not found to have a statistically significant relationship with the outcome variables. For performance rating, this is not surprising since employees are rated on how well they are performing in their current job and usually education is a more salient factor in obtaining a job (being hired) rather than in ongoing job performance. In order to be hired for a particular job (such as an accountant or financial planner) in the first place, there are minimum educational requirements, such as having a bachelor’s degree in finance. So, having a higher level of education might not differentiate on-the-job performance in similar job bands, especially in a group that is likely to be fairly homogeneous to begin with regarding education. It might be expected that those with higher levels of education would receive more promotions, however that was not the case in this study. This may be because those with higher levels of education were initially hired into higher level jobs and it was found that those in higher organizational levels received fewer job promotions than those in lower organizational levels in RQ3. So, education may be more of a differentiator at the hiring stage versus a factor that influences promotion or performance ratings. Education was also not found to be associated with merit pay increases in this study, meaning those with higher education did not receive significantly higher merit pay increases. In 2003 analysts using cross-sectional data from the Current Population Survey (CPS) found that individuals in the United States receive earnings that are approximately 10% higher for every additional year of schooling they have completed (Jaeger, 2003), so as far as pay is concerned, participants may receive a pay benefit of a higher education when
they are hired into the organization, and then education becomes less of a differentiator in employee advancement.
LIMITATIONS OF THIS STUDY

It is possible that the time period of this study (two years) was too short to see an impact of the training on employee performance. To be most effective, training needs to be reinforced when an employee is back on the job, and so it may be that there had not been sufficient time for that reinforcement to have taken place, or for the skills or knowledge gained from the training to have become apparent to the managers who were assigning performance ratings, pay increases and making promotion decisions. The skills and knowledge from training must be transferred to the workplace. Consequently, there may be a lag between the time the training is taken and an associated improvement in performance. Data extending only one year from the training may not have been sufficient to show an improvement that would be evident in performance ratings. For example, there was no way to know the date of the last performance rating. For some it could have immediately followed or even preceded the last training experiences. A longitudinal study is clearly needed. Although performance ratings are supposed to be a valid measure of how the participant has performed in his/her job over the previous year, they are known to be problematic for measuring true employee performance. First is the lack of calibration of raters across the large population included in this sample. Each participant's manager assigns a performance rating at the end of each year. The managers are provided with behavioral anchors to use as a guide in assigning ratings consistently across employees, however there is no system to ensure calibration across different managers. Second, performance ratings are often used by companies in a matrix to determine an employee's yearly compensation changes, such as the award of bonus pay and amount of merit pay
increase. These systems were used by this company. Thus, a rating in a certain range
would trigger a particular level of bonus compensation and merit pay increase. Because
there were limited budgets available for compensation, the Company had
recommended guidelines on the proportion of employees managers could put into
specific categories. For example, a recommendation that no more than 10% of the
employees should be given the highest rating, no more than 20% should be given the
next highest rating, and so on, was a standard process in this company. It is not known
how many of the managers of this study’s participants followed this recommendation.
For these reasons, this study included the promotion dependent variable, which is less
influenced by the constraints inherent in the performance and merit pay variables and
more driven by true high performance.

Another limitation of this study is that the data were archival. Several layers of
permission, all the way up to the chief executive officer, were required to obtain the data
and there were constraints on what could be shared and how it would be provided to the
researcher due to employee confidentiality and the sensitive nature of the data (for
example, data regarding compensation). Although the population was large (originally
3,377 participants) there were a lot of missing data, which drove the decision to use
pairwise, rather than listwise, deletion in running the analyses to avoid having to delete
too many participants. Some of the missing data were due to employees joining or
leaving the company during the timeframe covered by the study and some data were
missing in the PeopleSoft™ database that the data were extracted from through a
reporting function. Due to the large number of participants and the way the data were
stripped of names or ways of identifying individuals to ensure anonymity, it was not
possible to go back and request additional data without an intensive labor investment that the sponsoring company was not willing to make.
CONCLUSION

Training personnel are tasked by organizations to ensure that employee training courses affect positive changes in employee performance. Tracking training program effectiveness and return on investment, in both resource and financial terms, remains a difficult undertaking. This study was one such undertaking and had the outcome of failing to find a significant contribution on employee advancement measures for this group of finance professionals following participation in employee training. In this population, tenure and gender were more closely associated with employee advancement measures than participation in training. Higher tenure and female gender were associated with taking more general training. Higher education, female gender and lower organizational level were associated with taking more finance-specific training. This may indicate that females are motivated to take advantage of the opportunity to receive training at a higher rate than men due to the perception that they need to take every opportunity to level the playing field with men in order to advance in organizations.

The results of this study are concerning because organizational leaders, particularly in times of economic recession or other changing market conditions, must be mindful of expenditures that do little to generate profits and performance or increase revenue. Training needs to have a long-term impact on increasing employee and organizational performance to justify the financial investment. Based on the significant investment organizations continue to make in developing and delivering employee training, it would appear that decision makers view the training as valuable. However,
training professionals and researchers must do a better job of identifying appropriate measures of the impact of training.

More effective ways to accurately measure training impact on employee advancement will be beneficial to both companies who invest in training and the training professionals who design and provide it.
IMPLICATIONS FOR FURTHER RESEARCH

Manager-assigned employee performance ratings are a problematic variable with questionable validity as an outcome measure of training. Although research supports performance appraisal's positive contributions to morale and productivity (Mohrman & Mohrman, 1995), employees also perceive performance ratings in a negative way (Taylor, Tracy, Renard, Harrison & Carroll, 1995). Such negative feelings toward performance appraisal are corroborated by a Society for Human Resource Management study conducted in 1996, which found that 90% of respondents said their performance appraisal is ineffective (Nelson, 2000). This skepticism has, at its core, the same issues that make performance ratings a questionable measure of true employee performance. Managers may apply different standards to employee performance, may be biased, and may distort evaluations to further their own self-interests thereby making evaluations inconsistent and unreliable. It is recommended that future studies use alternative measures of employee performance, such as error rate or other job-relevant metrics (for example, number of sales, or sales goals expressed in dollar amounts). Care should be taken to select meaningful measures that are aligned with the job requirements and the training. One method that should be considered is to use the stated learning objectives for the courses as the outcome measures. Each course has as a part of its design the documentation of specific learning objectives that the course is structured around. If robust metrics around these objectives could be identified, then a direct link between the course, the objectives and the outcomes would be much more apparent and would form a more strong basis for saying the courses were successful in contributing to employee performance improvement.
Unless the company sponsoring the study does not have a compensation system that is closely linked to the employee performance appraisal process, merit pay increase should not be used as the only outcome variable. Of the three dependent variables in this study, promotion rate may be the better choice for an outcome variable due to the issues discussed earlier.

It is also recommended that the impact of training be studied as part of a longitudinal study that covers at least three years. Due to the potential lag time between taking training and seeing evidence of improvement on the job, a longitudinal study would be more appropriate.

Finally, this study combined all training hours, regardless of whether the modality was instructor-led, computer-based or e-learning. Future studies should address any differences in effectiveness across various delivery methods of the training.
Table 1

*Comparison of Groups Deleted and Included in Analysis*

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>M(SD) of those excluded from analysis</th>
<th>M(SD) of those deleted from analysis</th>
<th>M(SD) of those included in analysis</th>
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<tr>
<td><strong>Tenure</strong></td>
<td>684</td>
<td>7.96 (10.62)</td>
<td>16.79 (9.98)</td>
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<td>392.964***</td>
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<td><strong>2003 Organizational Level</strong></td>
<td>251</td>
<td>5.36 (10.66)</td>
<td>3.35 (1.52)</td>
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<td>65.033***</td>
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<td><strong>General Training Hours</strong></td>
<td>1229</td>
<td>59.14 (41.64)</td>
<td>67.70 (43.93)</td>
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<td>30.858***</td>
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<td><strong>Finance Training Hours</strong></td>
<td>1229</td>
<td>14.72 (13.51)</td>
<td>16.40 (12.46)</td>
<td></td>
<td>13.246***</td>
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<tr>
<td><strong>Performance</strong></td>
<td>746</td>
<td>2.51 (.56)</td>
<td>2.60 (.54)</td>
<td></td>
<td>15.267***</td>
</tr>
<tr>
<td><strong>Merit Increase</strong></td>
<td>713</td>
<td>12.10% (10.45%)</td>
<td>22.30%</td>
<td></td>
<td>362.476***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(12.98%)</td>
<td></td>
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*p < .05, **p < .01, ***p < .001.

*Note.* n = 2148 for participants remaining in the final sample
Table 2

*Descriptives, n = 2148*

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<tr>
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<th>Minimum</th>
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<th>Standard Deviation</th>
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<td>4.00</td>
<td>2.60</td>
<td>.54</td>
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<td><strong>Merit Pay Increase</strong></td>
<td>-50.60%</td>
<td>180.09%</td>
<td>22.30%</td>
<td>12.98%</td>
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<td><strong>2003 Organizational Level</strong></td>
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<td>7.00</td>
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<tr>
<td><strong>Tenure</strong></td>
<td>2.00</td>
<td>48.00</td>
<td>16.79</td>
<td>9.98</td>
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<td><strong>Education</strong></td>
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<td>4.00</td>
<td>3.03</td>
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<td><strong>Finance Training Hours</strong></td>
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<td>85.00</td>
<td>16.40</td>
<td>12.46</td>
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<td><strong>General Training Hours</strong></td>
<td>1.50</td>
<td>539.00</td>
<td>67.70</td>
<td>43.93</td>
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Table 3

*Bivariate Correlations Among Study Variables*

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<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tr>
<td>Average Performance Rating</td>
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<td>Merit Pay Increase</td>
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<tr>
<td>2003 Org Level</td>
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<td>.010</td>
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<td>Tenure</td>
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<td>-.197**</td>
<td>.405**</td>
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<tr>
<td>Education</td>
<td>.124**</td>
<td>.019</td>
<td>.280**</td>
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<td>.098**</td>
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<td>Finance Training Hours</td>
<td>.022</td>
<td>.035</td>
<td>-.050*</td>
<td>-.027</td>
<td>.072**</td>
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<td>General Training Hours</td>
<td>.050*</td>
<td>.056**</td>
<td>.005</td>
<td>.025</td>
<td>.019</td>
<td>.083**</td>
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<tr>
<td>Promotion</td>
<td>.305**</td>
<td>.435**</td>
<td>-.242**</td>
<td>-.290**</td>
<td>.019</td>
<td>.011</td>
<td>.105**</td>
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**p < .01, 2-tailed
*p < .05, 2-tailed
Table 4

*Hierarchical Regression Results Predicting Employee Performance Ratings (RQ1)*

<table>
<thead>
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<th>Variable/Step</th>
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<th>Step 2 $\Delta R^2=.034^{***}$</th>
<th>Step 3 $\Delta R^2=.001$</th>
<th>Step 4 $\Delta R^2=.004$</th>
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<td>Beta: -.135***</td>
<td>Beta: -.134***</td>
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<td>Beta: -.143***</td>
<td>Beta: -.142***</td>
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*p < .05., **p < .01., ***p < .001.*
Table 5

*Hierarchical Regression Results Predicting Merit Pay Increase (RQ2)*

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*p < .05, **p < .01, ***p < .001.*
Table 6

*Logistic Regression Results Predicting Promotion (RQ3)*

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*p < .05.,  **p < .01.,  ***p < .001.*
Table 7

Hierarchical Regression Results Predicting Hours of General Training Taken (RQ4)

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<tr>
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<table>
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<td>.064*</td>
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*p < .05,  **p < .01,  ***p < .001.
### Table 8

*Hierarchical Regression Results Predicting Hours of Finance Training Taken (RQ5)*

<table>
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<tr>
<th>Step 1</th>
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<td>$\Delta R^2 = .008^*$</td>
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</table>

<table>
<thead>
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<th>Beta</th>
<th>Beta</th>
</tr>
</thead>
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*p < .05., **p < .01., ***p < .001.*
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