THE IMPACT OF ORGANIZATIONAL LEARNING AND TRAINING
ON MULTIPLE JOB SATISFACTION FACTORS

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This study explored benefits of providing employee training and development beyond the specific content covered in such interventions. The relationship between training and development opportunities, and associated factors (job satisfaction, organizational commitment, and turnover intent) were significant among participants. Implications for training and development investment returns are considered. Previous research has identified training and development as an antecedent to perceived organizational support. Results failed to confirm perceived organizational support as mediating the relationship between training and organizational commitment. Age was found to be significantly correlated with job satisfaction, organizational commitment, and turnover intent, while education level was not found to have an impact. Limitations of this study, practical implications and recommendations for further study are discussed.
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CHAPTER I

INTRODUCTION

Researchers have shown much interest in evaluating the effectiveness of various training programs for organizational development. In a rapidly changing technological age, training programs are critical for keeping up with ever-evolving systems and processes. As a result, adult work-based education and advanced learning is at an all time high, according to the American Society for Training and Development’s (ASTD’s) 2006 State of the Industry Report. ASTD estimates that U.S. organizations spend more than $109 billion on employee training and development. In ASTD’s large sample of organizations (342 organizations with more than 139,000 employees) the average amount of money invested in training and developing each employee in 2006 was $1563. The significance of investing in developmental training is far reaching. Analysis of how nations acquire and sustain a competitive advantage indicates that industries investing the most on employee development are typically the most competitive (Porter, 1990). This suggests money spent on employee education and training is decisive in gaining a competitive advantage.

The implication for individual companies in this attempt to gain a competitive advantage is that consistent and direct investment in developmental training must be a component of the infrastructure to ensure this competitive edge. This concept is readily accepted in Japan, but American companies seem hesitant to make such as investment. American organizations may fear that after investing money to enhance employees’ KSAs (knowledge, skills and abilities) the employees will leave for jobs with competitors, taking the KSAs with them, and into the enemy camp (Holden, 2002). This
is a valid concern as job security remains on the decline, and work is often viewed as temporary (Blair & Kochan, 2000). However, it is also possible that providing training and development to employees might engender a sense of commitment, through perceived organization support, such that employee turnover is effectively reduced.

Another reason organizations seek to reduce their training budgets is that expenditures for developmental training are typically viewed as consumption rather than investment, in part because it is difficult to measure the return on this investment (Holden, 2002). While the value and importance of corporate human capital (knowledge, skills, ideas and commitment of employees) continues to increase, employment relationships are changing in ways that endanger loyalty and commitment.

Much attention has been devoted to the benefits predicated by perceived organizational support, organizational commitment, and job satisfaction. However, the exploration of a relationship between training and these three domains remains in its infancy. Further inquiry into how training and development interventions could be specifically designed to enhance this relationship might prove extremely valuable. I think data will indicate that organizations who invest in training and developing their personnel will experience heightened levels of perceived organizational support, commitment and job satisfaction, resulting in diminished turnover.

Purpose of the Study

The purpose of this study was to explore the benefits of providing employee training and development beyond the specific content covered in such interventions. Training refers to the imparting of specific knowledge and tasks. Development involves
processes and skills such as conflict mediation, critical thinking, or leadership (Muchinksky, 2003). The relationship between training and development opportunities and factors associated with job satisfaction was assessed. Consideration was given to how this relationship impacts the return on investment for training and development initiatives. Training and development has been identified as an antecedent to perceived organizational support, and to commitment. This study attempted to confirm that and also to assess perceived organizational support as a mediator for training and commitment and job satisfaction.

Review of the Literature

Job Satisfaction

Job performance may be influenced by many factors; one commonly studied is job satisfaction. While there is no single definitive definition of job satisfaction, it is typically considered an affective or emotional reaction to one’s job, or as an attitude one holds about their job (Weiss, Nicholas, & Daus, 1999). Job satisfaction is considered a predictor of job performance (Judge, Thoresen, Bono, & Patton, 2001). Therefore, as organizations seek to increase job performance, they may seek interventions that increase job satisfaction. One possible avenue to increase job satisfaction is through enhancing perceived organizational support (Piercy, Cravens, Lane, & Vorhies, 2006). Efforts to enhance job satisfaction may focus solely on the individual employee’s personality and demographics in relation to job satisfaction. This is known as the dispositional approach (Necowitz & Roznowski, 1994). More commonly, attempts to enhance job satisfaction focus on the work environment, as organizations have more
control over this.

Job satisfaction is considered to be both cognitive and affective (Weiss, Nicholas & Daus, 1999). However, measures of job satisfaction tend to focus primarily on the cognitive aspect (Organ & Near, 1985). Limited inquiry on the affective aspect has separated positive and negative affectivity into two distinct personality constructs. This research indicated a correlation between a positive affectivity disposition and increased job satisfaction, as well as between a negative affectivity disposition and decreased job satisfaction (Necowitz, & Roznowski, 1994).

For a comprehensive study of the relationship between job satisfaction and job performance, Judge, Thoreson, Bono, and Patton (2001) conducted a meta-analysis of 312 studies on the subject and confirmed the positive correlation between job satisfaction and job performance. They also found that this correlation was more significant for high complexity jobs, and less significant for low complexity jobs. This suggests that job complexity or an associated demographic (such as hierarchical level within the organization) mediates the relationship between job satisfaction and job performance.

Perceived Organizational Support

Social exchange theory emerged in the 1960s, holding that when one person does a favor for someone, there is an unspoken expectation of some future return (Blau, 1964). Exactly how and when the return might be unclear, but is still anticipated (Gouldner, 1960). In recent years, social exchange theory has enjoyed increasing attention applied to the exchange between an employee and an employing organization.
(Wayne, Shore, & Liden, 1997). In this context, the theory is known as perceived organizational support. Research shows perceived organizational support is positively related to the conscientious performance of job responsibilities and to commitment (Eisenberger, Fasolo, & Davis-LaMastro, 1990). Feeling valued and cared about by an organization facilitates employees' trust that the employer will fulfill its exchange obligations by providing appropriate recognition and rewards, commensurate with employee behavior. Other research has addressed perceived organizational support as a construct distinguishable from other previously established concepts, such as perceived supervisor support (Kottke & Sharainski, 1988), perceived work group support (Self, Holt, & Schaninger, 2005), organizational commitment (Van Yperen, Van Den Berg, & Willering, 1999) and job satisfaction (Eisenberger, Cummings, Armeli, & Lynch, 1997).

Conceptual work on the norm of reciprocity provides ideas about how an employee might respond to perceived organization support. The norm of reciprocity is based on two assumptions: “…1) people should help those who have helped them, and 2) people should not injure those who have helped them…” (Gouldner, 1960 p.171). This might be generalized to apply to an organization rather than an individual, motivating employees to help an organization that helps them. Employees are able to ascribe traits or qualities to an organization through a process of personification. This is a key process in developing one’s perception of organizational support.

Employees develop global beliefs concerning the extent to which the organization values their contributions and cares about their well-being (Eisenberger et al., 1986 p. 501). In an effective exchange relationship between employee and
organization, the employee would feel obligated to not only to perform the job adequately, but also to engage in behaviors that directly benefit the organization, and are beyond the scope of usual job expectations. Such behaviors that extend beyond expected parameters are referred to as organizational citizenship behaviors (Organ, 1988). Similarly, the organization would feel obliged to reciprocate such behavior by providing the employee with recognition and rewards (Rousseau, 1989).

*Increasing Perceived Organizational Support*

Savvy organizations would benefit from exploring how to increase perceived organizational support among employees. It appears possible to drive desired employee performance changes by assessing perceived organizational support and making conscious effort to increase it (Piercy, Cravens, Lane, & Vorhies, 2006). Perceived organizational support can be increased if the employee views the organization’s actions as the result of a positive evaluation (Eisenberger et al., 1986; Shore & Shore, 1995). This suggests that employees, who suspect they are being sent to developmental training to overcome inadequacies, will report minimized perceived organizational support, while employees who believe they have been specifically selected to receive the training as a form of reinforcement or recognition will report increased perceived organizational support.

This raises questions about what underlying processes lead employees to interpret certain human resource decisions as being rewards or reinforcements as opposed to necessary components of a job role. Research has shown that organizational experiences based on human resource decisions serve as indicators of
the organization’s evaluation of the employee’s potential (Sheridan, Slocum, Buda, & Thompson, 1990). As employees perceive links between human resource decisions and reinforcements and/or rewards, they are likely to view these decisions as meaningful indicators of future organizational support they will receive.

Perceived organizational support is also enhanced if the employee views the organization’s actions as discretionary. Benefits available to all employees regardless of performance, such as retirement or health benefits are not associated with perceived organizational support (Shore, & Shore, 1995). One type of discretionary organizational investment is training and development opportunities for employees. Investigation into what specific sort of discretionary rewards are most likely to increase perceived organizational support suggests it is those rewards linked with job performance (Eisenberger et al., 1986). Since leaders (supervisors and/or management) are typically charged with the responsibility of administering these rewards, positive relationships with leaders also contribute to greater levels of perceived organizational support.

Existing empirical research indicates that perceived organizational support is associated with leader support (Tetrick, Shore, & Miles, 1994). The quality of leader support also has a strong positive effect on perceived organizational support. Immediate superiors act as conduits of organizational resources, particularly in hierarchically structured organizations (Wang et al., 2005). In addition to making a formal impact through influencing salary and bonuses, they also have a less formal, ongoing impact by providing career advice, emotional support, networking opportunities, and additional industry information (Wayne, Shore, & Liden, 1997).

Frequency of developmental experiences including both formal and informal
training appears positively related to perceived organizational support. Employees who participated in more developmental experiences reported higher levels of perceived organizational support (Wayne, Shore, & Liden, 1997). It appears that participation in developmental training may serve as an antecedent to perceived organizational support independent of the specific content of the training, provided it is perceived as discretionary in nature. High levels of perceived organizational support create feelings of obligation, which compel employees to feel commitment toward their employers, and to reciprocate the perceived support by engaging in behaviors that support the stated goals and mission of the organization.

Organizational Commitment

Organizational commitment refers to an affective attachment to an organization, along with favorable decision to work within that organization, and the intent to continue work in the organization (Porter, Steers, & Mowday, 1974). Affective commitment has been described as a positive desire to act in a certain way (Mathieu & Zajac, 1990). It refers to the psychological attachment one has toward their organization. As research accumulated on employees’ organizational commitment, a demand developed for possible explanations for that commitment.

Organizational commitment appears to be especially significant in cultures and industries where employees develop high levels of self interest that might expedite leaving one organization for another (Beyer, 1990). Similarly, low organizational commitment may result when flexible and differentiated structures contribute to employee alienation. This is prevalent in industries such as the high technology field.
Research has positively linked perceived organizational support to affective commitment (Settoon, Bennett, & Liden, 1996) and confirmed that they are independent constructs (Van Yperen, Van Den Berg, & Willering, 1999). The relationship between an employee's perceived organizational support and organizational commitment is likely to be mediated by their organization-based self-esteem (OBSE) (Fuller, Barnett, Hester, & Relyea, 2003). OBSE is “an employee’s evaluation of his or her personal adequacy and worthiness as an organizational member” (Gardner & Pierce, 1998, p.50). An employee who believes that their organization values and appreciates them associates this as respect for their status within that organization. This status is likely to increase organizational commitment levels because it enhances their social identity, according to the tenets of social identity theory (Tyler, 1999).

Several empirical studies have indicated that employees display more affective commitment to their organizations when they believe that their organizations are committed to them (Piercy et al., 2006; Shanock & Eisenberger, 2006; Shore & Tetrick, 1991; Shore & Wayne, 1993). Employees exposed to more training opportunities are likely to exhibit higher levels of affective commitment (Meyer, & Allen, 1991).

Levels of organizational commitment resulting from perceived organizational support appear to be mediated by job level. Applying exchange theory provides an explanation for relationships between organizational commitment and perceived organizational support at various job levels. Employees at lower hierarchical levels in the organization tend to be more sensitive to organizational support than employees at higher levels (Cheung, 2000). This trend suggests different modes of motivation at
different job levels. Perhaps this reflects increasing expectations of organizational support with increasing job level.

Additional support for this idea might be found in studies addressing another demographic variable: level of education. Educational level is reported to be negatively correlated with organizational commitment (Mathieu & Zajac, 1990; Mottaz, 1988). Like job level, increased education can produce higher expectations for recognition and reward. This would also increase the likelihood of educated employees feeling inadequately rewarded by their employers, diminishing the level of organizational commitment. Educated employees might also perceive that they have many alternative job options (Ahmad & Bakar, 2003).

In contrast to job level and education level, age correlates positively with organizational commitment. Older employees have significantly higher affective commitment than younger employees (Steers, 1977). One explanation is that younger employees are relatively new to the corporate world, and perceive a plethora of alternate opportunities available to them. Tenure also mediates organizational support and commitment. Employees who have invested more time in the working world experience significantly higher affective commitment than new employees (Ahmad, & Bakar, 2003).

Organizational commitment has received much attention over the last decade as the driving force behind an organization’s performance. Along with job satisfaction, it is a key variable in explaining work-related behavior and its impact on performance (Benkhoff, 1997). The increasing speed and scale of change in organizations makes it challenging to achieve and maintain a competitive advantage, driving managers to
constantly seek ways to generate greater employee commitment. Today, expectations of employee performance are becoming more complex and demanding as a result of substantial transformation in human resource departments (Ahmad & Bakar, 2003). Levels of commitment have been found to have stronger positive relationships with attendance, effort, and continued employment with the organization than with actual job performance (Randall, 1990).

Management should be aware that employee commitment is dependent on factors other than monetary rewards, such as developmental interventions. This suggests that increased involvement and support for training would increase employee commitment and also positively impact the application of information and systems that comprise the intervention content. This is especially important to speed developmental change processes in times of transition and rapid growth. Yet, multiple studies have shown that superiors are not always supportive of training efforts (Lok & Crawford, 2001; Mathieu & Zajac, 1990; Saiyadain & Juhary, 1995).

Organizational Citizenship Behaviors

Behaviors that extend beyond the expected parameters of one’s job role are referred to as organizational citizenship behaviors (Organ, 1988). As such, organizational citizenship behaviors can be thought of as performance beyond the call of duty. When seeking to assess antecedents of organizational performance, one measure of enhanced performance is increased organizational citizenship behaviors. Piercy et al., (2006) made this distinction of “in role behavior” (organizational citizenship behaviors) providing a better measure of organizational performance than actual
business outcomes. This is because business outcomes are subject to a host of outside influences which are beyond the individual employee’s control, and thus bias the assessment. In contrast, organizational citizenship behaviors are under the individual’s direct control.

Perceived organizational support has been found to positively correlate with organizational citizenship behaviors (Wang, Law, Hackett, Wang & Chen, 2005). There is evidence that leadership transforms employees’ frequency and degree of organizational citizenship behaviors by modeling and nurturing such behaviors directly for their employees (Graham, 1995). There are various dimensions of organizational citizenship behaviors, typically arranged into five categories: altruism, conscientiousness, courtesy, sportsmanship and civic virtue (Muchinsky, 2003 p. 321).

Organizational citizenship behaviors impact the relationship between employees and their leaders. In an empirical study of performance evaluations, managers’ assessment of job performance was influenced as much by two facets of organizational citizenship behaviors (altruism and civic virtue) as by actual work output (MacKenzie, Podsakoff, & Fetter, 1991). Conscientiousness, courtesy and sportsmanship were not as influential in leader assessments.

This impact on evaluations also travels upward, positively influencing subordinates’ assessments of leaders. College students were found to give higher evaluations of teachers who displayed high organizational citizenship behaviors than to teachers with low organizational citizenship behaviors (Allen & Rush, 1998). This mutual positive regard in relationships that include reciprocal organizational citizenship behaviors facilitates trust, a key component of organizational commitment. Superiors
who model organizational citizenship behaviors are found to be associated with employees exhibiting the highest levels of organizational citizenship behaviors (Graham, 1995).

Research indicates antecedents for organizational citizenship behaviors fall into two categories: dispositional and situational. Studies show that people possessing certain personality traits are more predisposed to organizational citizenship behavior. The primary contributing trait is agreeableness, which refers to being good natured in dealing with other people, and the level of ease in navigating interpersonal relationships (McNeely & Meglino, 1994).

Situational antecedents are rooted in social exchange theory, and are specifically associated with organizational justice. The perception of fairness may prompt employees to define their relationship with the organization as a social exchange, influencing pro-social behavior (Organ, 1988). In order for employees to perceive fairness within their organization, managers must be consistent in their support. Consistency has been identified as a primary factor in facilitating the trust that inspires citizenship behaviors (Holmes, Langford, Welch, & Welch, 2002). Further research in this area indicated that organizational citizenship behaviors were related to procedural justice, but not distributive justice (Moorman, 1991). The implication here is that an employee who views their immediate supervisor as “fair” is more likely to exhibit citizenship behaviors. One possible explanation is that an employee who feels their supervisor is unfair might fear that the supervisor would take credit for their extra role behaviors and reap any associated benefits.

Motivating employees to perform citizenship behaviors is an integral part of
organizational success. For an organization to function effectively, people must be induced to join, to perform their prescribed roles efficiently, and to spontaneously and creativity perform roles beyond those addressed in their job definition (Katz & Kahn, 1978). A significant relationship between organizational citizenship behaviors and commitment has been found (O’Reilly & Chatman 1986). This indicates that practices which compel citizenship behaviors also incite loyalty and commitment in employees.

Training

Training has been defined as any management practice that can be controlled or managed to elicit a desired set of unwritten, reciprocal attitudes and behaviors, such as organizational commitment (Sparrow, 1998). Despite the tremendous availability of various training programs, there remains concern regarding the contribution of training to specific desired outcomes such as commitment. Commitment has been related to the actual and perceived human resource management practices such as training (Gaertner & Nolen, 1989). Perhaps training should be specifically designed to achieve increased organizational commitment (Lang 1992).

Individual perceptions about training appear to play an important role in affecting organizational commitment. Encouragement from managers and/or directly from trainers influences an employee’s sense of attachment to the organization, and feelings of moral obligation to stay. In one study, support for training (via encouragement from superiors) predicted as much as 52% of the variance of affective commitment (Ahmad & Bakar, 2003). In the same study, the actual benefit of the training (content specificity) accounted for only 19% of the variance of affective commitment. While these staggering
results have not been replicated, they suggest that the secondary benefits of training interventions (perceived organizational support, commitment and organizational citizenship behaviors) can be achieved independently from the specific content of the training intervention.

Encouragement and support for training can be a critical factor in influencing commitment and turnover. Variance for overall commitment (comprised of normative, affective, and continuous commitment) is predicted more by support for training (43%) than any other single factor, and most other factors combined (Ahmad & Bakar, 2003). Frequency of training opportunities is also a factor. Employees exposed to more training opportunities are likely to exhibit higher levels of affective commitment (Meyer & Allen, 1991).

Hypotheses

Hypothesis 1a: As suggested in the work of Ahmad & Bakar (2003); Gaertner & Nolen (1989); and Meyer & Allen (1991) it was hypothesized that training and learning positively predict job satisfaction.

Hypothesis 1b: As suggested in the work of Ahmad & Bakar (2003); Gaertner & Nolen (1989); and Meyer & Allen (1991) it was hypothesized that training and learning positively predict organizational commitment.

Hypothesis 1c: As suggested in the work of Ahmad & Bakar (2003); Gaertner & Nolen (1989); and Meyer & Allen (1991) it was hypothesized that training and learning negatively predict turnover intent.

Hypothesis 2: As suggested in the work of Piercy, Cravens, Lane & Vorhies
(2006) and Wayne, Shore & Liden (1997) it was predicted that perceived organizational support mediates the relationship between training and job satisfaction, organizational commitment, and turnover intent.

Hypothesis 3: As suggested in the work of Steers (1977) age was predicted to positively correlate with job satisfaction and organizational commitment, and negatively correlate with turnover intent.

Hypothesis 4: As suggested in the work of Mathieu & Zajac (1990) and Mottaz (1988) education level was predicted to negatively correlate with job satisfaction and organizational commitment, and positively correlate with turnover intent.
CHAPTER II

METHOD

This section provides a background for the current research, outlining how the current survey was created, participant demographics, the instrument and procedure. This study is utilizing archival data from a field study that gathered data on the factors under consideration. The earlier study consisted of two phases. The purpose of the first phase was to gather information that would be used to develop a survey for technical professionals in work teams. The purpose of the second phase was to construct a valid and reliable survey based on the interviews in the first phase and previous research.

Phase I - Qualitative Data Gathering

The purpose of Phase I was to gather data in order to create the survey. Interviews were conducted at various sites to select technical professionals representing various functions within their organizations. During spring 1992, 25 managers and engineers in various roles were interviewed. Collectively, they worked at three different defense industry manufacturing sites in the southwestern United States. A total of 24 participants provided biodata information, having an average age of 38.4 years. Ninety-six percent of the 24 participants were male; 63% percent held bachelor’s degrees, 29% held master’s degrees, and 4% held doctoral degrees.

Participants

Participants were employed in various roles, including manufacturing, operations, inventory control, purchasing, quality, finance, information system management,
assembly, maintenance, training and various engineering specialties (e.g., process, design, quality, product and equipment). Participants reported being in their industry an average of 12 years, with their current organization an average of 9.6 years, and in their current specialization an average of 6.6 years. They supervised an average number of 16 direct reports.

Procedure

Phase I of this study included an informed consent form describing the nature of the study and a biodata sheet asking for demographic information from the participants. Participants were informed that completing the form and interview would require approximately one hour of their time. Informed consent forms were distributed and signed, at which point participants were asked to complete the biodata form. Interviews followed. The interviews were transcribed and analyzed. A total of 80 themes were revealed through content analysis. An extensive search of published research instruments identified scales for 66 of these themes. One additional scale was added from a prior study conducted by the researchers. This information guided the selection of scales for the survey administered in Phase II of the study.

Phase II – Questionnaire Construction and Administration

The purpose of Phase II was to gather data from a large and varied group of subjects on the scales identified in Phase I. An introductory letter was sent, describing the project, and assuring the confidentiality of responses. Survey questions were selected from recognized, published instruments. Validity and reliability had been
established in prior research studies. Items chosen reflected the themes discovered during the interviews of Phase I.

Participants

Participants were gathered by targeting 50 companies, and sending them the informed consent letter requesting participation, a copy of the survey, an explanation of the benefits inherent in participating, and some background information of the theoretical models behind the study. Of the 50 organizations targeted, 14 agreed to participate, resulting in a total of 541 participants from United States and Canada. A total of 49 of these participant cases were dropped from the original sample, due to one or more survey questions being left unanswered. Using this conservative standard, 492 cases remained for analysis. Most companies represented (12 of 14) were publicly traded American corporations, one was a privately held American company, and one was under foreign ownership. The companies represent the following industries (number of organizations in parentheses): office equipment (3); aerospace (3); electronics (3); petroleum refining (1); plastics (1); industrial gases (1); aluminum processing (1).

Professions represented by the participants included administration, customer service, development, engineering, facilities, finance, human resources, information systems, marketing, material operations, planning, purchasing, quality, real estate sales, and technical writing and illustration. All respondents had at least an associate’s degree, and 22% of respondents held masters or doctoral degrees. The average age was 35.9 years; 70% were male. Participants’ average reported work week was 45
hours and 25% indicated that had at least one direct report. Tenure with their current company was an average of 7.5 years, serving in their current role for an average of 2.8 years.

Apparatus

The complete survey consisted of a total of 66 published scales, covering three levels: individual, work team and the organization. The total number of questions for all scales combined was 302. Six of these scales were investigated in this study: Job Satisfaction, Learning, Organization Commitment, Perceived Organizational Support (Work Facilitation), Training, Turnover Intent. Definitions were drawn from generally established meanings in the literature.

Procedure

Surveys were distributed, in paper copy, to technical professional employees by coordinating personnel at their respective organizations. Surveys were not numbered until completed and returned by participating organizations, so a precise response rate to the survey is not available. As the completed surveys were received, each survey was assigned a nine-digit code that classified the survey according to the company, and participant number. Surveys were then provided to the data entry office of the University of North Texas for data entry.

Method of Analysis

Descriptive statistics of range, mean, standard deviation, skewness and kurtosis
were computed for each demographic variable and whole scale total for each of the six scales being assessed. All factors were analyzed using a correlation matrix to check for collinearity.

Hypothesis 1 included two independent variables: training and learning, and three dependent variables: job satisfaction, organizational commitment, and turnover intent. This hypothesis was tested using three separate equations for multiple regression. The first equation assessed interaction between the independent variables (IVs) training and learning and the dependent variable (DV) of job satisfaction. The second equation assessed interaction between the IVs training and learning and DV organization commitment. The third equation assessed interaction between the IVs training and learning and DV turnover intent. As collinearity was of concern, the variance inflation factor (VIF) was calculated. For indicative VIF figures, composite IVs were created from training and learning, and a simple regression run for each DV.

Hypothesis 2 assessed perceived organization support as a mediator of the presumed relationships between the IVs of training and learning, and the DVs of organization commitment, job satisfaction and turnover intent. The zero order correlation coefficients for each linear relationship were compared to the partial correlation coefficients with perceived organizational support held constant. The significance of these differences was calculated using a Z-test. It was predicted that perceived organization support is a necessary interim step between training and learning and all three DVs.

Hypothesis 3 was tested using analysis of independent correlations between age and job satisfaction, organizational commitment, and turnover intent. Pearson’s $r$ was
used to calculate the strength of each correlation. Effect size and power was assessed.

Hypothesis 4 was tested using analysis of independent correlations between education level and job satisfaction, organizational commitment, and turnover intent. Pearson’s $r$ was used to calculate the strength of each correlation. Effect size and power was assessed.
CHAPTER III

RESULTS

This chapter presents the results of the study, beginning with a summary of descriptive statistics, followed by the results of the four hypothesis tests. The hypotheses were tested using linear multiple regression and correlation tests. Due to the high number of participants and quality of the data, there was no need to make provisions for missing data. Participants who skipped a single question on any of the six scales considered in the current study were eliminated from further consideration. Using this approach, 42 cases were eliminated from the original 541, resulting in a total of 499 participants in this study.

Descriptive Statistics

A total of 19 items were used to identify the six factors considered in this study. Five of the six factors (training, learning, work facilitation, commitment, and turnover intent) were measured using three items each. Job satisfaction was measured using five items, two of which were reverse scored (see Appendix B). All items were measured using a 7-point Likert type scale, ranging from strongly disagree to strongly agree with a neutral midpoint. The descriptive statistics for all variables is shown in Table 1, on the following page. The correlation coefficients for all variables are presented in Table 2.
Table 1

Descriptives of All Variables

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<td>1.00 – 7.00</td>
<td>2.194</td>
<td>1.519</td>
<td>2.307</td>
</tr>
<tr>
<td>POS</td>
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<td>3.702</td>
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<td>1.580</td>
</tr>
<tr>
<td>Age</td>
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<td>20 – 63</td>
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<tr>
<td>Education</td>
<td>493</td>
<td>1 – 6</td>
<td>3.09</td>
<td>0.927</td>
<td>0.860</td>
</tr>
</tbody>
</table>

Note. DEMO = demographic variable; DV = dependent variable; IV = independent variable; POS = perceived organizational support; SD = standard deviation.

Table 2

Complete Bivariate Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Edu</th>
<th>Train</th>
<th>Learn</th>
<th>Sat</th>
<th>Comm</th>
<th>Turn</th>
<th>POS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td>PrsnCr</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td></td>
<td>PrsnCr</td>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-0.074</td>
<td>-0.016</td>
<td>-0.119**</td>
<td>-0.130**</td>
<td>0.043</td>
<td></td>
</tr>
<tr>
<td>Edu</td>
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<td></td>
<td>PrsnCr</td>
<td>0.109</td>
<td>0.115*</td>
<td>0.100*</td>
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<tr>
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<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>0.109</td>
<td>0.012</td>
<td>0.023</td>
<td>-0.019</td>
<td>-0.036</td>
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<td>0.873</td>
<td>0.843</td>
<td>0.420</td>
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<td></td>
<td>0.736</td>
<td>0.410</td>
<td>0.614</td>
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<tr>
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<td>PrsnCr</td>
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<td>0.013</td>
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<td>0.005</td>
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<tr>
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<td></td>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
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<td>0.012</td>
<td>0.784</td>
<td>0.614</td>
<td>0.843</td>
<td>0.843</td>
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<tr>
<td>Sat</td>
<td>n</td>
<td></td>
<td>PrsnCr</td>
<td>476</td>
<td>493</td>
<td>499</td>
<td>499</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>0.030</td>
<td>0.000</td>
<td>0.023</td>
<td>0.005</td>
<td>0.005</td>
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</tr>
<tr>
<td>Comm</td>
<td>n</td>
<td></td>
<td>PrsnCr</td>
<td>476</td>
<td>493</td>
<td>499</td>
<td>499</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>0.005</td>
<td>0.000</td>
<td>0.013</td>
<td>0.005</td>
<td>0.005</td>
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</tr>
<tr>
<td>Turn</td>
<td>n</td>
<td></td>
<td>PrsnCr</td>
<td>476</td>
<td>493</td>
<td>499</td>
<td>499</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td>0.000</td>
<td>0.023</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>POS</td>
<td>n</td>
<td></td>
<td>PrsnCr</td>
<td>476</td>
<td>493</td>
<td>499</td>
<td>499</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td>0.348</td>
<td>0.111</td>
<td>0.127**</td>
<td>0.131**</td>
<td>0.420</td>
<td></td>
</tr>
</tbody>
</table>

Note. *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed); PrsnCr = Pearson correlation; Comm = commitment; POS = perceived organizational support; Sat = job satisfaction; Turn = turnover intent.
Multiple Regression

To test the first set of hypotheses, multiple regressions were run using SPSS. In each case, training and learning were the IVs. As mentioned in the methods, there was some concern that participants might not have considered training and learning as separate constructs, leading to collinearity of these two variables. The correlation coefficient, which measures the relationship between these two variables was high \( r(499) = .399, p < .01 \). The VIF was low (1.190). The VIF is a measure of the shared overlap between the IVs and the DV. The low result indicates that collinearity was not an issue for the IVs training and learning. Therefore, no composite variable was created.

For Hypothesis 1a, training and learning positively predicted job satisfaction. The descriptive statistics are in Table 1 above. Each relationship between the two predictors and the three dependent variables was examined independently. Since the regression weight for a single predictor and a single dependent variable is the same as the correlation between the variables, the correlations from Table 2 support this hypothesis. Hypothesis 1a: training correlated significantly with job satisfaction \( r(499) = .299, p < .01 \); as did learning \( r(499) = .399, p < .01 \). As expected, the regression equation (which measures the variance accounted for between the variables) was significant, \( R^2 = .183 \), adjusted \( R^2 = .179 \), \( F(2, 496) = 55.392, p < .01 \).

Hypothesis 1b: training correlated significantly with commitment: \( r(499) = .368, p < .01 \), and for learning \( r(499) = .553, p < .01 \). As expected, the regression equation was significant, \( R^2 = .331 \), adjusted \( R^2 = .328 \), \( F(2, 496) = 122.789, p < .01 \).

Hypothesis 1c: training negatively predicted turnover intent, \( r(499) = -.226, p < .01 \).
.01, as does learning $r(499) = -.293, p < .01$. As expected, the regression equation was significant, $R^2 = .183$, adjusted $R^2 = .179$, $F(2, 496) = 55.392, p < .01$.

Hypothesis 2 stated that perceived organizational support mediates the correlation between training and learning, and job satisfaction, organizational commitment, and turnover intent. For each correlation, a partial correlation was calculated, controlling for the variable of perceived organizational support (presented in Table 3). Z-scores were then calculated for the difference between the zero order correlation and the partial correlation. Results are presented in Table 4 on the following page. For training and satisfaction, $Z = .094$; training and commitment $Z = .094$; training and turnover intent, $Z = -.125$. For learning and satisfaction, $Z = .047$; learning and commitment $Z = .031$; learning and turnover intent, $Z = -.079$. None of these Z-scores were found to be significant.

Table 3

*Partial Correlation Coefficients (Controlling for Perceived Organizational Support)*

<table>
<thead>
<tr>
<th></th>
<th>Commitment</th>
<th>Satisfaction</th>
<th>Turnover Intent</th>
<th>Learning</th>
<th>Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>.5939(**)</td>
<td>.7008(**)</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover Intent</td>
<td>-.5183(**)</td>
<td>-.7008(**)</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td>.5510(**)</td>
<td>.3961(**)</td>
<td>-.2882(**)</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>.3624(**)</td>
<td>.2927(**)</td>
<td>-.2178(**)</td>
<td>.3969(**)</td>
<td>–</td>
</tr>
</tbody>
</table>

*Note.* **Correlation is significant at the 0.01 level (2-tailed).
Table 4

Z-Test for Zero Order and Partial Correlations

<table>
<thead>
<tr>
<th></th>
<th>Satisfaction</th>
<th></th>
<th>Commitment</th>
<th></th>
<th>Turnover Intent</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Zero Order</td>
<td>Partial</td>
<td>Z-score</td>
<td>Zero Order</td>
<td>Partial</td>
<td>Z-score</td>
</tr>
<tr>
<td>Training</td>
<td>0.299</td>
<td>0.293</td>
<td>0.094</td>
<td>0.368</td>
<td>0.382</td>
<td>0.094</td>
</tr>
<tr>
<td>Learning</td>
<td>0.399</td>
<td>0.396</td>
<td>0.047</td>
<td>0.553</td>
<td>0.551</td>
<td>0.031</td>
</tr>
</tbody>
</table>

Note. Z scores significant at 1.96 when alpha is set at .05

Hypothesis 3 stated that age is correlated with job satisfaction, organizational commitment, and turnover intent. Descriptive statistics are provided above in Table 1. A bivariate correlation analysis was conducted to evaluate how well age predicted job satisfaction, organizational commitment and turnover intent. This analysis found a significant correlation for age with each of the three criteria scales, though just barely within the significant range for satisfaction, \( r(476) = .100, p < .05 \). The strongest correlation with age was commitment, \( r(476) = .130, p < .01 \), and as expected age and turnover intent were found to be negatively correlated, \( r(476) = -.119, p < .01 \).

Hypothesis 4 stated that education is positively correlated with satisfaction, commitment, and perceived organizational support, and negatively correlated with turnover. A bivariate correlation analysis was conducted to evaluate how well education level predicted job satisfaction, organizational commitment and turnover intent. This analysis found no significant correlation for education level with any of the three criteria scales, satisfaction: \( r (493) = .023 \), commitment: \( r (493) = .130 \), and turnover intent: \( r(493) = .005 \).
CHAPTER IV

DISCUSSION

This discussion explores the results of the current study, including implications for theory and practice. Limitations of the study are addressed, as well as suggestions for further research. The findings of this current study are interpreted below, including the relationships between training, learning, job satisfaction, commitment, perceived organizational support, turnover intent, age, and education.

Hypothesis 1a: Training and Learning Predict Job Satisfaction

Training and learning were established as being separate constructs, free from a collinear relationship. Collinearity was of concern for these two variables, due to speculation about how the population might apply their own definitions to these constructs, possibly considering them interchangeable. The VIF for training and learning in this study was very low. The high education level of this sample might account for the clearly defined constructs. Also, the wording of the training and learning scale items provided distinction between them. This eliminated the need to consider analysis with a composite variable for the IV.

For the technical professionals participating in this study, higher levels of job satisfaction were significantly correlated with increased training and learning opportunities. As this was a relatively well educated sample of technical professionals, it is understandable that training and learning opportunities would promote job satisfaction. Personality could also play a role, motivating some to pursue higher levels of education and also find their work more satisfying. The predictor variable learning
was found to be more significant than training in relation to job satisfaction. No assumptions can be made regarding the applicability of the training content received by the participants. However, one might speculate that on the job learning seemed more applicable to respondents' job roles, enhancing the means for job performance, and therefore exerting greater influence on job satisfaction.

Hypothesis 1b: Training and Learning Predict Organization Commitment

Training and learning were found to have a stronger predictive relationship with commitment than with job satisfaction. The strongest correlation between either of the two IVs and any of the three DVs in this study was between learning and commitment ($r = .553$). For the organization most concerned with the bottom line, this would be desirable. Levels of commitment are more likely to have a positive impact on the bottom line than employee satisfaction. As previously discussed, enhanced commitment incites organizational citizenship behaviors (Randall, 1990), and improved in-role performance (Benkhoff, 1997).

Hypothesis 1c: Training and Learning Predict Turnover Intent

As predicted, training and learning were significantly negatively correlated with turnover intent. While these correlations were strong, the nature of the scale items for turnover intent, along with the data gathering process may have reduced the significance found here. As discussed in the methods section, the survey was administered through contacts within each participant organization. One of the three items comprising the scale was “I am actively looking for a job outside.” Respondents
who had any reservations about the anonymity of their answers might have chosen to answer such a question conservatively, even when indicating the extent to which they disagreed with it. Many studies have attempted to provide a cost figure associated with attrition. One study estimated that the cost of replacing an employee who leaves the company at approximately three times the employee’s salary. If accurate, this has significant financial implications for an organization with employees scoring high on turnover intent. The current study findings show the value of providing training and learning opportunities to their employees in the form of significantly reduced turnover intent.

Hypothesis 2: Perceived Organizational Support is a Mediating Factor

Previous studies have identified perceived organizational support as a predictor of job satisfaction and organization commitment (Eisenberger, Fasolo, & Davis-LaMastro, 1990). This suggested that perceived organization support might serve as a mediating factor between predictors training and learning, and dependent variables job satisfaction, commitment and turnover intent. This was not found in the current study, as holding that variance constant made very little change in the correlation coefficients of each of the DVs (refer to Table 3). Since this data was collected, more robust measures of perceived organization support have been established (Moorman, Blakely, & Niehoff, 1998), and should be used in future instruments.
Hypothesis 3: Age Correlates with Job Satisfaction, Commitment, and Turnover Intent

This study wished to consider how demographic variables influence the same three criteria variables. Some participants left the question about age blank, but these cases were not eliminated from analysis unless they also failed to answer one of the scale items. Therefore the number of participants for the correlation equations involving age are slightly smaller than the other predictor variables ($n = 476$). Age was found to be significantly correlated with all three variables. Older workers are more likely to have families and homes, providing stability that enhances a state of contentedness that increases job satisfaction and commitment, and reduces intent to quit. Further consideration might be given to see how tenure with the current organization affects this relationship, as a possible moderator. Increased time with an organization would provide greater opportunity to develop affiliations with coworkers that might increase satisfaction and commitment.

Hypothesis 4: Education Correlates with Job Satisfaction, Commitment, and Turnover Intent

This study also considered the demographic variable of education level. As might be anticipated with a sample of technical professionals, this was a well educated group. Some participants did not answer the question about education level. As with missing age data, these cases were not eliminated from analysis unless they also failed to answer one of the scale items. Of these 493, 385 held a bachelor’s degree, and the remaining 108 had at least some graduate education. This may have created an issue with restriction of range. With 78% of participants having a bachelor’s degree, it is very
difficult to identify any predictive ability associated with the education variable.

Perhaps as education level increases, so do job expectations, which might hinder satisfaction, and commitment. In some circumstances, education level and commitment have been negatively correlated (Mathieu & Zajac, 1990). As previously discussed, increased education may cause employees to feel they bring more value to an organization, and have a host of other job opportunities readily available (Ahmad & Bakar, 2003).

Implications for Practice

Both training and learning appear to have a strong influence on job satisfaction, organizational commitment and turnover intent. These factors have been previously established to impact on-the-job performance (Judge, Thoreson, Bono, & Patton, 2001). However, education level does not appear to be linked to these performance driving factors. Still, many organizations provide tuition reimbursement programs. The findings in this study suggest that those tuition reimbursement funds might be better leveraged if they were applied to internal training and learning programs. Furthermore, as learning consistently showed a stronger correlation than training with the factors under consideration, resources should be focused there. The implications for practice suggest that establishing mentoring programs and communities of practice within organizations might provide the best return on human resource capital.

Limitations of the Study

While this study utilized a clean and rich data set, the participants were limited to
technical professionals. Technical professionals may comprise a large sector of the work force, but that doesn’t mean these findings should be generalized to include the rest of the working population. All respondents were centralized in the southwestern United States, providing limited cultural range.

As mentioned in the results section, 78% of this sample had bachelor’s degrees. This creates an issue with restriction of range, which would diminish any predictive power of education level as a predictor variable. Also, when the data was gathered, no measure of non response rate was captured. So, all the data is subject to this possible bias. Finally, as the survey was administered by contacts within the participant organizations, there may have been possible inconsistencies in how the survey was administered.

Idea for Future Research

Individuals high in personality factors such as need for achievement or growth need strength might be intrinsically motivated to attain a higher level of education, and to experience heightened job satisfaction, and commitment. Such factors should be included in further exploration on the topic. As evidence grows for the value of internal training and learning initiatives, further research should consider how to accurately assess the return on investment from such programs. The content of the training is likely to influence the perceived value and therefore levels of perceived organizational support and perhaps also job satisfaction. An experimental model that took the training content into account would provide a more comprehensive study. In addition, how might training, and learning programs be designed and developed to enhance their value,
beyond the specific content of the initiatives? As the American baby boomer population is reaching retirement age, a vast resource of subject matter experts will be exiting the workforce. Additional research in how to gather these individuals’ unique knowledge to train and develop a leadership pipeline would be very helpful.

**Conclusion**

This study has provided additional support for the idea that training and learning initiatives are a wise investment, rather than merely an expense. In addition to increasing the knowledge, skills and abilities of employees, training and development opportunities also appear to add value beyond the content covered in such interventions. Such opportunities seem to increase job satisfaction, and organization commitment which have a positive impact on the bottom line by motivate organizational citizenship behaviors, and decreasing turnover intent.
APPENDIX A

DEMOGRAPHIC VARIABLES
<table>
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<th>Variable</th>
<th>Mean Value</th>
<th>SD</th>
<th>Response Percentage</th>
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<td></td>
</tr>
<tr>
<td>Sex</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(male)</td>
<td>349</td>
<td></td>
<td>70%</td>
</tr>
<tr>
<td>(female)</td>
<td>150</td>
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<td>30%</td>
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<tr>
<td>Education</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(Bachelors degree)</td>
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<td></td>
<td>78%</td>
</tr>
<tr>
<td>(Masters/Doctoral)</td>
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<td></td>
<td>22%</td>
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<tr>
<td>Supervise employees</td>
<td>125</td>
<td></td>
<td>25%</td>
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<tr>
<td>Years in present job</td>
<td>2.8 years</td>
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<td></td>
</tr>
<tr>
<td>Tenure with company</td>
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<td>2.76</td>
<td></td>
</tr>
<tr>
<td>Industries represented (number</td>
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<td>of companies):</td>
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</tr>
<tr>
<td>Computers, office equipment</td>
<td>(3)</td>
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<td></td>
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<td>Scientific, photographic,</td>
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<tr>
<td>control equipment</td>
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<td>Plastics materials, synthetic</td>
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<td>resins</td>
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<td>Industrial gases</td>
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<td></td>
</tr>
<tr>
<td>Aluminum processing</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B

QUESTIONNAIRE ITEMS
Job Satisfaction

Generally speaking, I am very satisfied with this job.

I frequently think of quitting this job.

I am generally satisfied with the kind of work I do on this job.

Most people on this job are very satisfied with the job.

People on this job often think of quitting.

Learning

Most departments review their work on a regular basis.

Most of us in this company are committed to helping each other learn from our work.

In general, learns as much as is practically possible from its activities.

Organization Commitment

I find that my personal values are similar to the organization’s values.

I am proud to tell others that I am part of this organization.

This organization inspires one’s best job performance.

Perceived Organizational Support (Work Facilitation)

My manager provides definite guidelines for work procedures, and expects group members to follow them.

My manager expects acceptance of his/her expertise and ideas regarding the technical aspects of task performance.

My manager develops overall plans and schedules and uses them to control the group’s activities.
Training

There are appropriate orientation procedures in this company for new hires.

I have received the training I need to do a good job.

I would like more training.

Turnover Intent

As soon as I can find a better job, I'll leave.

I am seriously thinking about quitting my job.

I am actively looking for a job outside.

Survey Answer Options

1. Strongly Disagree
2. Moderately Disagree
3. Slightly Disagree
4. Neutral
5. Slightly Agree
6. Moderately Agree
7. Strongly Agree

Note: Scale reproduced from Survey of Technical Professionals in Teams © 1993, Center for the Study of Work Teams
REFERENCES


