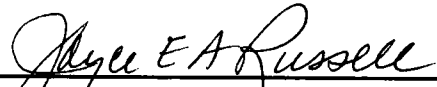


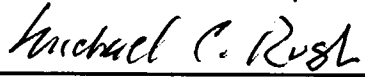
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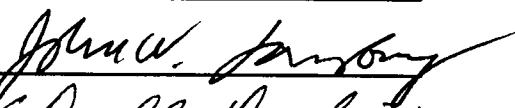
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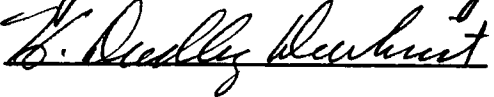


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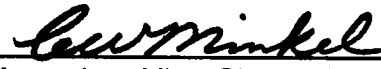






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FACTORS RELATED TO THE
PERCEIVED EFFECTIVENESS OF A
CAREER DEVELOPMENT WORKSHOP

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Lynn Bauer Curtis

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ABSTRACT

This study examined several factors that were hypothesized to be related to the effectiveness of a career development workshop. Previous literature in the areas of career development and training was used to identify individual difference variables expected to be related to reactions to the workshop, knowledge after the workshop (career insight and knowledge of individual development planning), and behaviors after the workshop (career planning and seeking developmental activities.) It was hypothesized that job involvement and perceived job insecurity would be positively related to participant reactions to the workshop. It was further hypothesized that job involvement, perceived job insecurity, and supervisor support for career development would each be related to knowledge after the workshop with motivation to learn mediating each of the relationships. Similar hypotheses were proposed regarding behaviors after the workshop. Specifically, it was hypothesized that job involvement, perceived job insecurity, and supervisor support for career development would be related to behaviors after the workshop with motivation to transfer mediating the relationships. Finally, locus of control was expected to have a positive relationship with career development behaviors after the workshop, and self-efficacy was expected to moderate that relationship.

Data was collected through a series of three surveys. A pre-test was administered approximately two weeks prior to the workshop, a post-test was

administered immediately after the workshop, and a follow-up survey was sent to participants three to six months after the workshop. The sample for the study included 252 workshop participants, 247 of whom completed the pre-test and post-test and 36 of whom completed the pre-test and follow-up survey.

In addition to the hypotheses under question, two research questions were also examined, one related to the effectiveness of the workshop and one related to intercorrelations among criteria for workshop effectiveness. Results indicated that the career development workshop was effective in that participants had positive reactions, reported higher levels of career insight and knowledge of individual development planning after the workshop, and reported higher levels of career planning (though not seeking developmental activities) after the workshop. Furthermore, significant correlations were found between reactions and each of the knowledge measures and between knowledge of individual development planning and each of the behavior measures.

The results related to the hypotheses were generally not supportive. Only one hypothesis was supported by the data, and another received partial support. Perceived job insecurity did have a significant positive correlation with reactions to the workshop. In addition, self-efficacy moderated the relationship between locus of control and one of the career development behavior variables (seeking developmental activities).

The remaining hypotheses were not supported by the data. There was not a significant correlation between job involvement and reactions to the workshop. Motivation to learn did not mediate the relationships between job involvement, perceived job insecurity, and supervisor support and career development knowledge after the workshop. Motivation to transfer also did not have the expected mediated effect between the individual difference variables and the career development behaviors. Finally, there was not a significant correlation between locus of control and the behaviors.

Possible explanations for these results are discussed in Chapter V. Contributions of the study to theory, research and practice are also discussed, as well as limitations and suggestions for future research.

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CHAPTER I

INTRODUCTION

Career development programs in organizations have become increasingly popular over the last ten to twenty years (Gutteridge, Leibowitz, & Shore, 1993; Russell, 1991). More and more organizations are implementing career development programs in hopes of attaining the many benefits espoused in the popular literature (e.g., increased morale and commitment, increased retention of employees, better communication; Leibowitz, Farren, & Kaye, 1986) and to better prepare employees for the boundaryless organization, a flexible company which is continuously reshaping and resizing to meet the needs of the environment (Mirvis & Hall, 1994). In addition, career development programs have become more prevalent due to the many demographic and environmental changes in the world today.

As several authors have noted, a variety of workforce and environmental changes are influencing today's workplace (Leibowitz, Farren, & Kaye, 1986; London & Stumpf, 1986; Offerman & Gowing, 1990; Russell, 1991). As the workforce becomes increasingly diverse, with more women, minorities, and older workers, employers recognize they will have to learn to understand and adapt to the varied needs of their employees. For example, individuals today are demanding more flexibility, more control over their own careers, and more time to engage in activities which align with their own values. At the same time that

organizations are facing these changing demands from their employees, they are facing changing demands in their environment. Organizations are facing global competition, increased pressures to be effective, efficient, and customer-focused, and an increased need to attract and retain valuable workers. All of these changes are necessitating that companies consider their employees' needs in order to make the organization more competitive. Furthermore, as the boundaries within and between organizations become less apparent, so too will the boundaries of a career (Mirvis & Hall, 1994). Mirvis and Hall state that employees working in these boundaryless organizations will be expected to have flexible careers in which they transition easily across organization levels, organization functions, various jobs, and even different companies. They further suggest that organizations will need to put in place mechanisms (e.g., career planning programs) to assist employees in the transition to this boundaryless career.

Probably due to the changes in organizations and careers described above, the availability of career development programs is increasing, as evidenced by the results of several studies on career development practices (e.g., Gutteridge & Otte, 1983; Russell & Curtis, 1993; Walker & Gutteridge, 1979). Along with the increase in availability of career development programs, there has been an increase in literature on career development in the last decade. Unfortunately, this literature has tended to remain qualitative and descriptive, providing little recommendations for the design, implementation, and

maintenance of quality career development programs. Authors have repeatedly called for experimental evaluations of career development programs (e.g., Russell, 1991), but evaluation studies continue to be rare.

The present study investigates factors related to the effectiveness of a career development program, specifically a career development workshop. The workshop is conducted in a classroom format and includes such techniques as lecture, discussion, and group activities. Due to the format of the career development workshop, it can be considered a specialized type of training program. For this reason, the literature on training effectiveness and training evaluation is particularly relevant to the study.

Similar to the career development literature, research in the training area has traditionally suffered from a lack of evaluation studies (Wexley, 1984). Goldstein (1989) notes that there has been recent progress in documenting evaluation studies in the training literature. Many of these studies report using Kirkpatrick's (1959) criteria to evaluate the effectiveness of training programs (i.e., reactions, learning, behavior, results). In addition, recent literature has begun to explore other issues related to training evaluation, such as motivational influences (e.g., Mathieu, Tannenbaum, & Salas, 1992; Noe & Schmitt, 1986). This research on training has allowed an increased understanding of training and the factors that influence the effectiveness of training programs.

The current study attempts to use a similar evaluation methodology as that used in the training literature to evaluate the effectiveness of a career

development workshop. This study will be one of the first to evaluate a career development program, responding to Gould's (1979) call for research demonstrating the success or failure of career programs. The study will provide insight into why the program is or is not effective and the types of employees that benefit the most from a career development workshop. The need for such research has been recognized previously in calls for research to understand why training programs are effective and for whom (Mathieu et al, 1992; Tannenbaum & Yukl, 1992). This need is particularly prevalent for career programs, a particular type of training program, as they have traditionally suffered from a lack of research (Russell, 1991). The study will contribute to current research by attempting to verify many of the claims regarding the benefits of career development programs, and by applying the training research to a career development setting. This research will also contribute to our theoretical understanding of why such programs are effective by investigating potential correlates and mediators of the effectiveness of a career development workshop. Finally, the results of this research will assist practitioners in maximizing both career development workshop effectiveness and employee benefits from the workshop.

Literature in the field of career development proposes a variety of indicators of career development program effectiveness. Gutteridge (1986), in particular, identifies many indicators of career program effectiveness, separated into the categories of goal attainment, actions/events completed, changes in

performance indices, and attitudes/perceptions. Gutteridge includes such criteria as: greater self-determination, greater self-awareness, acquiring organizational information, improved goal-setting capability, improved career communications between employees and supervisors, improved individual/organizational career matches, career decisions conducted, employee career plans implemented, career actions taken, improved employee morale, reduced turnover rates, positive reactions to career tools, perceived benefits of the career system, and employee career planning skills.

Each of the outcomes identified above, and others cited by Gutteridge (1986), are indicators of overall career program effectiveness. It can be expected, however, that different career programs would have varying impact on each of these variables. For example, self-assessment tools might have the most impact on employee's self-awareness while a career resource center might provide the most organizational information, and career planning workbooks might have the most impact on career planning skills. Thus, different career programs may have different levels of influence on various indicators of career program effectiveness. A career development workshop which covers a variety of information would likely be related to several of the indicators of effectiveness.

Interestingly, upon reviewing the suggested measures of career program effectiveness, one can identify many similarities to Kirkpatrick's (1959) criteria for training program effectiveness. Kirkpatrick identified four primary criteria for evaluating the effectiveness of a training program: reactions (trainees'

satisfaction with a program), learning (knowledge gained, change in attitudes), behavior (performance or behavioral changes), and results (organizational changes in levels of absenteeism, quantity or quality of work, etc.). These criteria can be applied to a career program using the indicators of effectiveness identified by Gutteridge (1986).

Many of the indicators of career program effectiveness identified by Gutteridge (1986) can be classified into the four criteria noted by Kirkpatrick (1959), as depicted in Figure 1.1. Gutteridge's indicators of positive reactions to the career tool and perceived benefits of the career tool are similar to Kirkpatrick's reaction criteria. The indicators of career development workshop effectiveness which can be considered similar to the criteria of learning would include increased self-awareness, increased goal-setting capability, and increased career planning skills. Behavior measures for the workshop would include such variables as communicating career plans to the supervisor, identifying a career plan, and completing a development plan. Finally, under results, a career program or workshop may affect employee morale, organizational turnover, and organizational absenteeism. Thus, it can be seen that although the relationship has not been explicated in previous literature, there is clear overlap between the proposed indicators of career program effectiveness and the traditional criteria for training effectiveness.

This study will examine the factors related to the effectiveness of a career development workshop recently implemented in an organization using three

Criteria for Training Programs	Indicators of Career Program Effectiveness
Reactions	Positive reactions to career tool Perceived benefits
Learning	Increased self-awareness Increased goal-setting capability Increased career planning skills
Behavior	Identifying a career plan Communicating career plans Completing a development plan
Organizational Results	Improved employee morale Decreased organizational turnover Decreased organizational absenteeism

Figure 1.1. Comparison of Kirkpatrick's (1959) Training Criteria and Gutteridge's (1986) Indicators of Career Program Effectiveness

primary criteria as indicators of program effectiveness. These criteria are drawn from Gutteridge's (1986) indicators of career program effectiveness, and are grouped according to Kirkpatrick's (1959) criteria for training evaluation. Reactions to the workshop will be the first measure of effectiveness. Reactions are included in this study because participants' reactions to the program are purported to impact the level of future participation in programs and top management's desire to continue offering programs (Goldstein, 1986; Kirkpatrick, 1987). The second measure of effectiveness will be career development knowledge after the workshop. Two measures of knowledge will be included to reflect the learning objectives of the workshop, specifically career insight/self-knowledge and knowledge of the individual development planning process. Two measures of behavior will also be examined, as the ultimate goal of the workshop is not just that participants learn more about themselves and the career planning process, but that they use this information to engage in career planning and development. The measures of behavior that will be included in the study are the extent of career planning and the extent to which employees seek developmental activities in support of their career plan. Organizational results will not be measured as a part of this study because of the many extraneous factors that can impact these global organizational measures and the longer time frame required to measure these variables.

This study examines the relationship of several individual difference variables to the effectiveness of the career development workshop. The

individual difference variables to be examined include job involvement, perceived job insecurity, perceived supervisor support for career development, locus of control, self-efficacy for engaging in career development, motivation to learn, and motivation to transfer.

Job involvement is expected to be related to all three measures of effectiveness. First, given that the career development workshop is a good one, job involvement is expected to be related to reactions to the workshop because individuals with higher job involvement would be more likely to react positively to a workshop that helps them plan a part of their life that is very important to them. Job involvement is also expected to be related to knowledge through its positive relationship to motivation to learn the material, and to career development behavior through its positive relationship to motivation to transfer the behaviors.

It is also expected that perceived job insecurity will be related to the measures of effectiveness. Perceived job insecurity is likely to be related to reactions because individuals with high perceived job insecurity are more likely to find a career planning workshop valuable. Perceived job insecurity may also motivate individuals to learn the material and to transfer the learned behaviors to their jobs (i.e., to use the tools and concepts in their own career planning), thus resulting in knowledge of career planning and engaging in career development behaviors following the workshop.

Perceived supervisor support for career development is another important individual difference variable in studying the effectiveness of the career

development workshop. Similar to the previous variables, perceived supervisor support is expected to be related to knowledge through its influence on motivation to learn and to behavior through its influence on motivation to transfer.

The final variable included in the study is locus of control. It is expected that those individuals who have an internal locus of control will be more likely to demonstrate career development behaviors. It is further hypothesized that self-efficacy for engaging in career development behaviors will moderate this relationship such that the relationship between locus of control and the behaviors will be stronger to the extent that participants have high self-efficacy for engaging in career development behaviors.

In summary, job involvement and perceived job insecurity are expected to be related to *reactions* to the career development workshop. Job involvement, perceived job insecurity, and perceived supervisor support for career development are expected to be related to *knowledge* after the workshop through their effects on motivation to learn. Job involvement, perceived job insecurity, and perceived supervisor support are expected to be related to career development *behaviors* through their influence on motivation to transfer. Lastly, locus of control is expected to be related to career development behaviors, and self-efficacy is expected to moderate the relationship.

The current study examines the relationship of the individual difference variables mentioned above to the perceived effectiveness of a career

development workshop, in terms of reactions, knowledge, and behavior. The study relies on literature from both career development and training in the identification of the variables to be studied. Results of the study will provide information regarding the effectiveness of the workshop and benefits of career development programs proposed by previous authors (e.g., Gutteridge, 1986; Leibowitz et al, 1986). In addition, because several of the variables included can potentially be influenced by the organization (e.g., perceived supervisor support for career development), the results will assist practitioners in their efforts to maximize the effectiveness of a career development workshops.

Most importantly, the study will contribute to our theoretical understanding of career development. Theory-building in the area of career development is critical not only for our understanding of career programs but also for the advancement of the career field. Furthermore, without theory surrounding the career field, attempts at offering succesful career programs will be a guessing game and researchers will continue to have little or no understanding of why particular individuals did or did not benefit from the program. Thus, this study will examine the role of various individual difference factors in the perceived effectiveness of a career development program in an effort to begin the theory-building process and to shed light on the mechanisms underlying the effectiveness of a career program.

CHAPTER II

REVIEW OF THE LITERATURE

Review of Career Development Literature

As Hall (1976) defines, careers are the "individually perceived sequence of attitudes and behaviors associated with work-related experiences and activities over the span of the person's life" (p. 4). Thus, a person's career, and therefore career development, encompasses a wide range of issues and experiences. Hall (1986), based on Storey (1976), identifies career development as the interaction of career planning and career management. Career planning occurs at the individual level and is the process of learning about oneself, opportunities and choices, identifying career goals, and obtaining developmental experiences that will aid in the attainment of that goal. Career management, on the other hand, occurs at the organization level and is the employer's process of preparing, implementing, and monitoring individuals' career plans (Hall, 1986). Organizational career development, manifested in such programs as self-assessment tools, individual counseling, and information services, results from the interaction of career planning and career management and is the process of linking individual career goals with organizational needs (Gutteridge et al, 1993; Hall, 1986).

More recent literature in the area has suggested that the definition of career development will have to take on an even broader perspective as careers

can no longer be defined based on long-term relationships with a single employer (Hall & Mirvis, 1995). Hall and Mirvis suggest that, as long-term relationships with employers become more uncommon, careers will be more likely to be defined in terms of a person's skills, their self-identify, and capacity to learn. This will result in corresponding changes in the definition of career development but will make the concept of career development no less important. As suggested by Mirvis and Hall (1994), the boundaryless organizations of the future will lead to boundaryless careers in which employees must be flexible and take responsibility for designing their own careers. Thus, career development may become even more critical in the more turbulent environment of today's organizations, as the individual employee will have to take more responsibility for his or her career and organizations will have to provide the information and support needed by employees for this career self-management (Hall & Mirvis, 1995).

Availability of Career Development Programs

Several authors have noted the increasing availability of career development programs (Gutteridge et al 1993; Russell, 1991). Many reasons have been cited for the more widespread use of career development, including organization changes and changes in individual employees. Organizational changes which may be a factor in the increasing use of career development include: flatter organizational structures making upward movement less likely;

competition sometimes leading to layoffs and downsizing; new technologies leading to increased obsolescence and plateauing; and increasing pressures on organizations to be more socially responsible (Leibowitz et al, 1986; London & Stumpf, 1986; Offerman & Gowing, 1990; Russell, 1991).

Although these organizational factors are important, changes in employees also have been cited as reasons for the increasing availability of career development programs. Some of these employee changes include: changes in values leading to demands for more challenge and opportunities for growth and development; increased desires to balance work and family; increased numbers of employees working in nontraditional settings and demanding flexibility; and shifts in the demographics of the workforce (Leibowitz et al, 1986; London & Stumpf, 1986; Offerman & Gowing, 1990; Russell, 1991). Thus employers have experienced many changes, both organizational and workforce-related, which are often cited as reasons for the increasing availability of career development programs.

Survey research on career development programs does indicate that more organizations are offering career development programs, perhaps as a result of some of the changes mentioned above. Walker and Gutteridge (1979) studied the career development practices of 225 companies in various industries. They found that career development was not as prevalent as expected and tended to be informal and experimental. However, Griffith (1980), in a survey of 188 Fortune 500 firms, found that some type of career

development program was used by most of the organizations studied.

Gutteridge and Otte (1983) found that career development programs were common in the 40 U. S. companies that they studied.

More recent research has confirmed that career development programs are widespread in large organizations. Russell and Curtis (1993) found that over 75% of Fortune 500 companies offered some of the career programs investigated, including training, orientation, job posting, succession planning, and outplacement. In addition, Gutteridge et al (1993) conducted a survey of 1000 large U. S. organizations and 96 U. S. government agencies and report that nearly 70% of these firms had or were implementing career development programs. These surveys demonstrate that, at least in large organizations, career development programs are widely available. Furthermore, Hall and Mirvis (1995) anticipate that the opportunities for career development will be further enhanced by the broadening definition of careers. The popularity of these career development programs is perhaps increasing due to the anticipated benefits of such programs for individual employees and for organizations.

Benefits of Career Development Programs

Career development programs are thought to offer many benefits both to the organization and to employees. Potential organizational benefits include: better use of employee skills; better distribution of information; better communication; increased retention of valuable employees; improved public

image; increased effectiveness of human resource systems; and clarification of organization goals (Leibowitz et al, 1986). Gutteridge (1986) also identifies other organizational benefits of career development systems including: improved career matches between individuals and organizational needs; improved responsiveness to Equal Employment Opportunity and Affirmative Action pressures; identification of management talent; decreased turnover and absenteeism; improved employee morale; increased promotion from within; and decreased time to fill job vacancies. Thus, career development programs are expected to benefit the organization in a multitude of ways.

In addition to organizational benefits, career development programs are proposed to benefit the individual employee. These benefits include: increased skill in managing careers; enrichment of present job; increased job satisfaction; more realistic career goals and expectations; better performance feedback; more accurate information about the organization; increased personal responsibility for managing one's own career; and better communication between managers and employees (Leibowitz et al, 1986). Individual benefits identified by Gutteridge (1986) include: increased self-determination; increased self-awareness; acquiring organizational career information; increased personal growth and development; and improved goal-setting capability. According to this literature, career development programs can have substantial positive benefits for the employee.

Although many organizational and individual benefits have been hypothesized in the literature, the current research on career development does not indicate whether such benefits are actually achieved. Preliminary research does, however, suggest that career development programs do benefit the organization. Most of the respondents in the Walker and Gutteridge (1979) survey rated their career development programs as partially to moderately effective. Respondents stated that their programs enhanced job performance, allowed employees to use human resource systems more effectively, and improved utilization of employee talent (Walker & Gutteridge, 1979).

Respondents on the Russell and Curtis (1993) survey believed that their organization's career development program had the strongest impact on job satisfaction, communication, employee retention, and organizational image but less impact on absenteeism, skills obsolescence, and career plateauing. In addition, similar to results of the Walker and Gutteridge (1979) survey, subjects in the Gutteridge et al (1993) study reported that career development, at least in general, enhances job performance, equips employees to use human resource systems more effectively, allows improved utilization of employee talent, and helps employees deal with a low-growth environment.

Although this is valuable information, these results are generally based on perceptions (e.g., perceptions of survey respondents, program developers, trainers, or human resource professionals) rather than any formal evaluation of the program. Without such formal evaluation, it is impossible to make firm

conclusions regarding the organizational or individual impact of career development programs. This lack of evaluation is surprising given the many benefits espoused in the literature. If career development programs have the potential for such widespread and important benefits, it is vital that we engage in an evaluation of currently existing programs.

Evaluation of Career Development Programs

As mentioned above, evaluation of organizational career development programs is rare. The lack of evaluation of career development programs has been cited as a problem by several authors (e.g., Russell, 1991). Morgan, Hall, and Martier (1979), in their study of 56 firms, found that evaluation of career development programs was atypical and generally included only reaction measures or organization measures such as profit. The Russell and Curtis (1993) survey indicated that Fortune 500 firms evaluated career programs only "seldom to occasionally", and these evaluations relied primarily on reaction measures. Only occasionally did these firms measure learning, behaviors, or results.

Other surveys also indicate a lack of evaluation. Gutteridge et al (1993) reported that 24% of the organizations studied did not evaluate their career development programs. In addition, 64% evaluated only with informal verbal feedback from participants, less than 35% of firms used questionnaires to measure attitudes, learning, or behavior, and only 12% used data analysis on

organizational results (Gutteridge et al, 1993). It would appear that formal, experimental evaluation of career development is not a high priority in most of these organizations.

Not only is there a lack of evaluation, but there are problems with evaluation studies which do exist. London and Stumpf (1986) and Russell (1991) identify several problems with the current evaluation research in the field of career development, including lack of control groups, over-reliance on self-report measures, limited behavioral measures, few longitudinal studies, failure to use a variety of criteria, and failure to collect data from multiple sources. When evaluations are conducted, pre- and post-tests, control groups, or longitudinal studies are seldom used (Russell & Curtis, 1993). For example, many of the surveys of career development programs include questions on the effectiveness of career development programs. However, the results are frequently based on the respondent's perceptions rather than any experimental evaluation (e.g., Gutteridge et al, 1993; Russell & Curtis, 1993).

Another problem with career development evaluation research is that it is not based on theory. This oversight results in the use of convenient criteria rather than a variety of criteria, each based on specific rationale. The lack of theory and lack of a model of career development program effectiveness also results in a failure to improve our understanding of the career development process. For example, we have little understanding of when career development programs are more effective, why they are more or less effective, what variables

influence their effectiveness, which employees benefit the most, and how to improve the effectiveness of career programs. Answers to such questions are critical to advance the field of career development in terms of understanding the effectiveness of career development programs and in terms of making practical recommendations for the design and implementation of such programs. By not evaluating career development programs, not only are we left with no information regarding the effectiveness of the program, but we are also left with no additional understanding of the variables which impact the effectiveness of career development programs in general.

Although not based on the evaluation of particular career development programs, there has been some research attempting to explain career development phenomenon, such as career planning and exploration. Stumpf, Collarelli, and Hartman (1983) developed the Career Exploration Survey which has been used to study how career exploration affects career decisions, development, and job outcomes. Noe and Steffy (1987) used the Career Exploration Survey (Stumpf et al, 1983) to study the role of individual characteristics and assessment center evaluations on the career exploration behavior and job involvement of 107 educators. Of particular interest to this study was the finding that locus of control influenced career exploration behavior, as did assessment center evaluations, career strategy, and attitudes towards the assessment process. Stumpf and Lockhart's (1987) study of 331 business students indicated that work-role salience and work preferences were

significantly related to the instrumentality of exploration and the importance of obtaining one's preferred position, which were significantly related to exploratory behavior and the amount of information obtained. These studies of career exploration may provide us with some initial information regarding the variables which may influence the effectiveness of career development programs.

Other studies can provide further information on what variables may be important to the effectiveness of a career development program. For example, Gould (1979) studied 277 employees in an upwardly mobile occupation. Results indicated that self-esteem, internal locus of control, and career effectiveness dimensions (salary, career involvement, identity resolution, and adaptability) were related to increased career planning. In a study of career motivation conducted on 273 subjects, Noe, Noe and Bachhuber (1990) found that the importance individuals placed on work and career, perceptions regarding the presence of motivating job characteristics, managerial support, career stage, distance from career goal, and the match between individual and organizational career goals were related to various dimensions of career motivation. In addition, Maurer and Tarulli (1994), in a study of 1,360 clerical, technical, and sales employees, found that perceived environment variables (company policy, supervisor support, coworker support, company orientation), perceived outcomes, and person variables (career insight, self-efficacy, job involvement, and perceived need for improvement) were related to voluntary development activity. Studies such as these provide suggestions for the inclusion of variables

in a framework for career development program effectiveness. Although these studies do not specifically examine the effectiveness of career development programs, they do study general career processes, and it can be expected that some of the same variables would help to predict the effectiveness of a career development program.

The current study is an evaluation of a particular career development program, a career planning workshop. Attempts are made to identify the individual difference variables related to career development program effectiveness. The framework for the study and rationale for hypotheses are based upon the current career development literature, as well as on the literature in the field of training.

Review of Training Evaluation Literature

Training evaluation can be defined as the determination of the effectiveness of a training program (Kirkpatrick, 1987). Goldstein and Gessner (1988) define training evaluation as the systematic collection of descriptive and judgmental information needed to make decisions regarding the training program. Put simply, evaluation is feedback regarding the training (Friedman & Yarbrough, 1985). Although many recognize the importance of evaluating training programs, evaluations are rarely conducted. In an early review of training literature, Campbell (1971) stated that the training literature was non-empirical, was in need of more sophisticated analysis, and lacked statistical

technology. Wexley (1984), in another review of the training literature, continued to be pessimistic and commented on the poor quality of attempts to evaluate training programs. More recently, researchers have noted the improvement in the literature on training evaluation (Campbell, 1989; Goldstein, 1989). Although evaluation of training and other human resource programs still appears to be infrequent (Russell, 1991; Russell & Curtis, 1993), the improvement of the research in this area is promising.

Much of the literature on training evaluation relies on work done to identify criteria for training evaluation (e.g., Kirkpatrick, 1959). These criteria are described in detail below.

Criteria for Training Evaluation

Previous authors have advocated the use of four major criteria for the evaluation of training programs (Kirkpatrick, 1959). These criteria included participants' reactions to the training, the degree of participants' learning from the training, changes in participants' behavior as a result of the training, and organizational results such as decreased turnover or improved job performance.

The use of Kirkpatrick's training criteria is advocated frequently in the training literature. Alliger and Janak (1989) explain that the popularity and the power of Kirkpatrick's model is a result of its simplicity and ability to help others conceptualize training evaluation. Each of the four criteria for training evaluation is further described below.

The first criterion for training evaluation is reactions, which measures how well the trainees liked the training program (Kirkpatrick, 1987). Reactions are the feelings, attitudes, or impressions of the trainees regarding the training. Reaction measures are generally collected immediately following the training program via a self-report questionnaire. Reactions are the most commonly used means of evaluating training and other human resource programs (Friedman & Yarbrough, 1985; Russell & Curtis, 1993). Reactions of participants can be critical to gaining organizational support for a training program and ensuring high participation rates at future sessions.

Learning is the second of Kirkpatrick's criteria for training evaluation. Learning refers to the acquisition of concepts, principles, facts, or knowledge as a result of the training program. Measures of learning are based on the learning objectives of the training program so that they accurately represent the material covered in the training. The primary concerns about measuring learning are that the researcher is validly measuring the variables of interest and the degree to which the researcher can attribute any changes in learning to the training program (Friedman & Yarbrough, 1985).

The third criterion of training evaluation is behavior. This criterion refers to demonstrated changes in behavior that can be attributed to the training program. It is generally recommended that behavior change be measured three to six months after the training program, allowing time for behavior change to take place, and that measures be obtained not only from the trainee but also

from others with whom the trainee is in contact (Friedman & Yarbrough, 1985; Kirkpatrick, 1987).

The final criterion identified by Kirkpatrick (1959) is organizational results. Potential organizational results that could be realized from a training program include decreased absenteeism, decreased turnover, improved quantity or quality of work, improved performance, etc. The primary problem with collecting results measures is that it is very difficult to separate variables and determine the extent to which any changes in these global organizational measures are in fact due to the training program as opposed to other factors impacting the organization (e.g., changes in organization structure, changes in other human resource policies). Organizational results will not be measured in this study due to the difficulty of measuring such variables and the many confounds that can influence the results.

As described by Alliger and Janak (1989), Kirkpatrick's levels of training criteria have frequently been misunderstood and overgeneralized. Alliger and Janak warn against assuming that these four levels of criteria are arranged in ascending order of the amount of information provided, are causally linked, or are positively correlated with one another. There currently is insufficient research to determine if there are in fact causal relationships among these criteria.

For the purpose of this study, the criteria of reactions, learning, and behavior are treated independently. No hypotheses are made regarding the

inter-correlations or causal relationships among the criteria for two primary reasons. First, there is insufficient research to determine the appropriate relationships among the criteria. Second, reactions, learning, and behavior are independently valuable outcomes of this workshop. In other words, participants' positive reactions to the workshop are important for the continuation of the workshop and are a valuable criteria for training success. Similarly, participant learning and changes in behaviors are each important results of the career development program. The factors related to each of these outcomes (reactions, learning, and behaviors) is the focus of the present study rather than examining the relationships among the outcomes. However, supplemental analyses will be conducted on the relationships among the outcomes to further the literature in this area.

Models of Training Effectiveness

Several authors have proposed models of the training process. One of the first models of training effectiveness was proposed by Noe (1986). Noe's model of training effectiveness, as depicted in Figure 2.1, identifies several individual difference variables which are hypothesized to impact the effectiveness of the training program. More specifically, locus of control is expected to influence the participant's reactions to skills assessment feedback, expectancies and self-efficacy, and career/job attitudes (including exploration and job involvement). Noe further proposes a complex relationship between

motivation to learn, motivation to transfer, environmental favorability, and Kirkpatrick's levels of training criteria.

Noe and Schmitt (1986) tested Noe's (1986) model of training effectiveness with 60 educators who were participating in a training course on administrative and interpersonal skills. Little support was found for Noe's original model as hypothesized. However, tests of a proposed revised model, pictured in Figure 2.2, received more positive results. In this model, significant paths were found between reaction to skills assessment and reaction to training, between job involvement and career planning, between job involvement and learning, between learning and performance, and between behavior and performance.

Another model of training effectiveness was proposed by Mathieu et al (1992), depicted in Figure 2.3. Mathieu et al proposed several antecedents to training motivation, including career planning, job involvement, method of assignment, and situation constraints. Additional relationships were proposed among the other variables, which included education, reactions, learning, and pre- and post-test behavior measures. In their study with 106 participants in a proofreading skills training course, significant paths were found between the training motivation X reactions interaction term and learning, between education and learning, between learning and the post-test, and between the pre-test and the post-test. A revised model, pictured in Figure 2.4, did fit the data better.

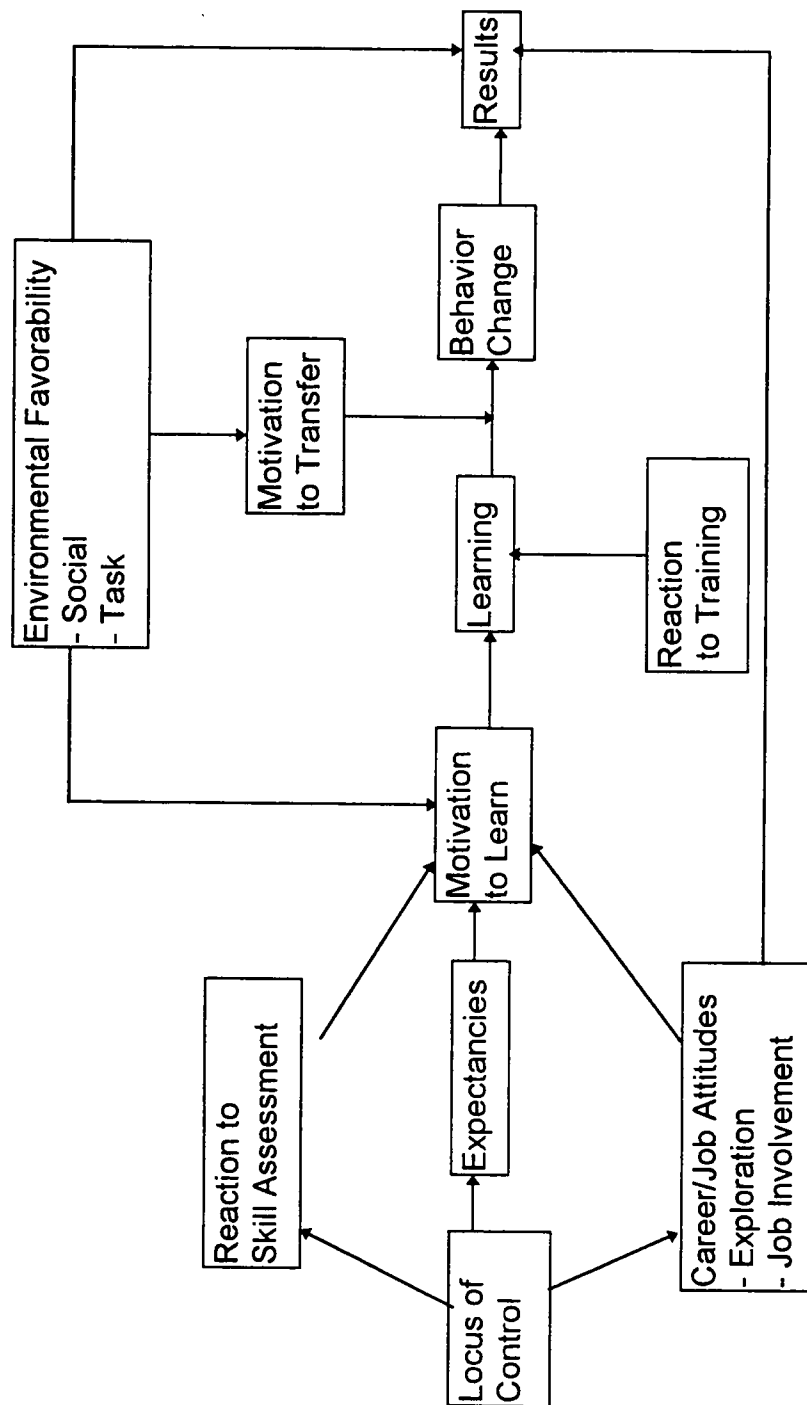


Figure 2.1. Noe's (1986) Model of Motivational Influences on Learning, Supervisor Behavior, and Performance.

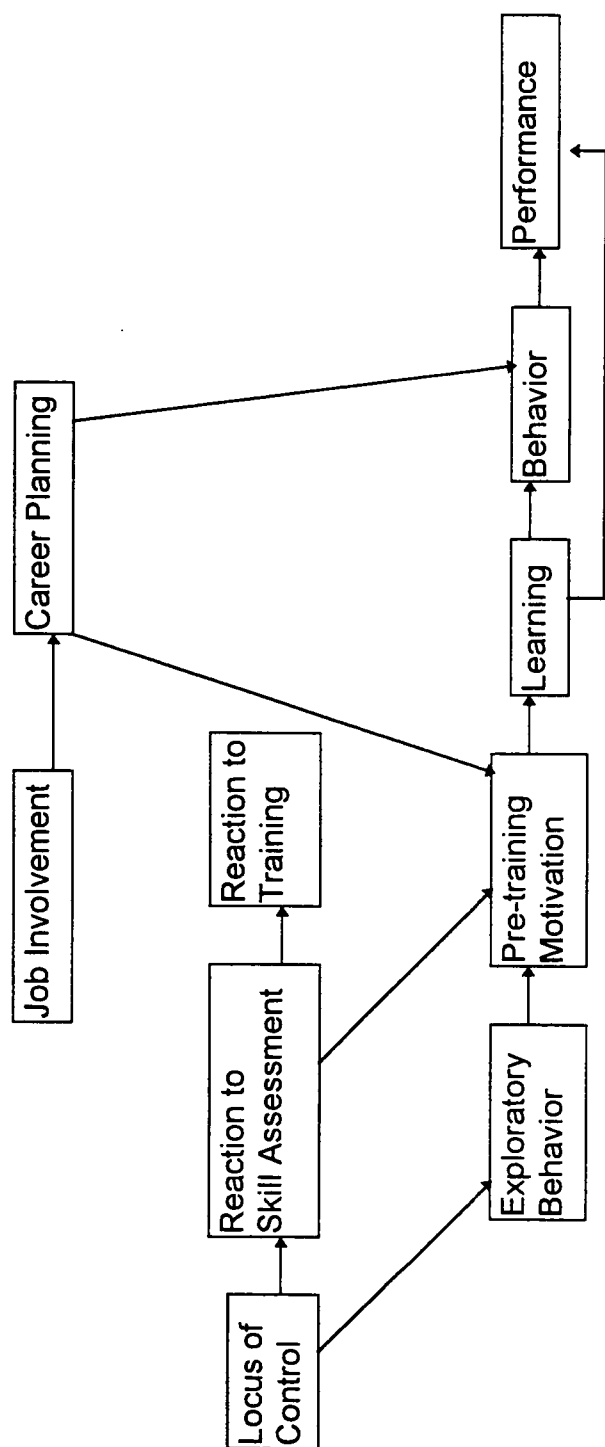


Figure 2.2. Noe and Schmitt's (1986) Alternative Path Model of Motivational Influences on Learning, Supervisor Behavior and Performance.

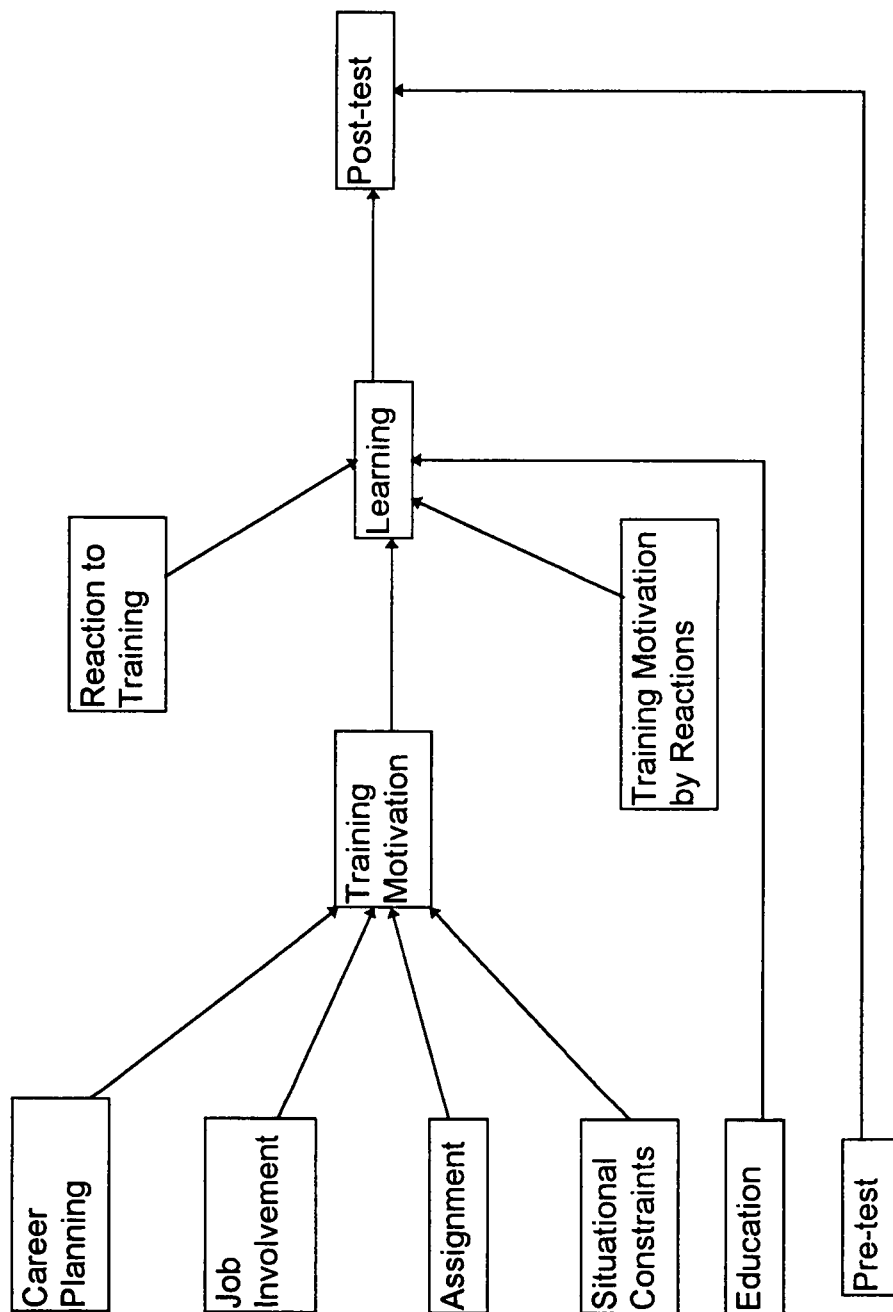


Figure 2.3. Mathieu, Tannenbaum, and Salas' (1992) Model of Training Effectiveness.

Significant paths were found in the revised model between assignment and reaction, reactions and post-test, the motivation X reactions interaction term and learning, learning and post-test, education and learning, and the pre-test and post-test. Although the revised model did fit the data better than the original model, it still provides only limited information on the antecedents to trainee motivation.

Thus, both Noe (1986) and Mathieu et al (1992) identified models of training effectiveness which proposed individual difference variables as antecedents to trainee motivation. Despite the lack of total support for the models, they have furthered the literature on training evaluation by providing some initial information on potential variables which should be considered and by providing a framework around which additional research on training evaluation could be built.

Another model of the training process which is critical to this study is Baldwin and Ford's (1988) model of the transfer process. Baldwin and Ford defined transfer of training as the maintenance of learned material over time and the generalization of that learned material. Their model of the transfer process (depicted in Figure 2.5), proposes three primary antecedents to the transfer process: trainee characteristics (ability, personality, motivation), training design (principles of learning, sequencing, and content), and work environment (support, opportunity to use). These variables influence the learning and retention of the training material as well as the maintenance and generalization

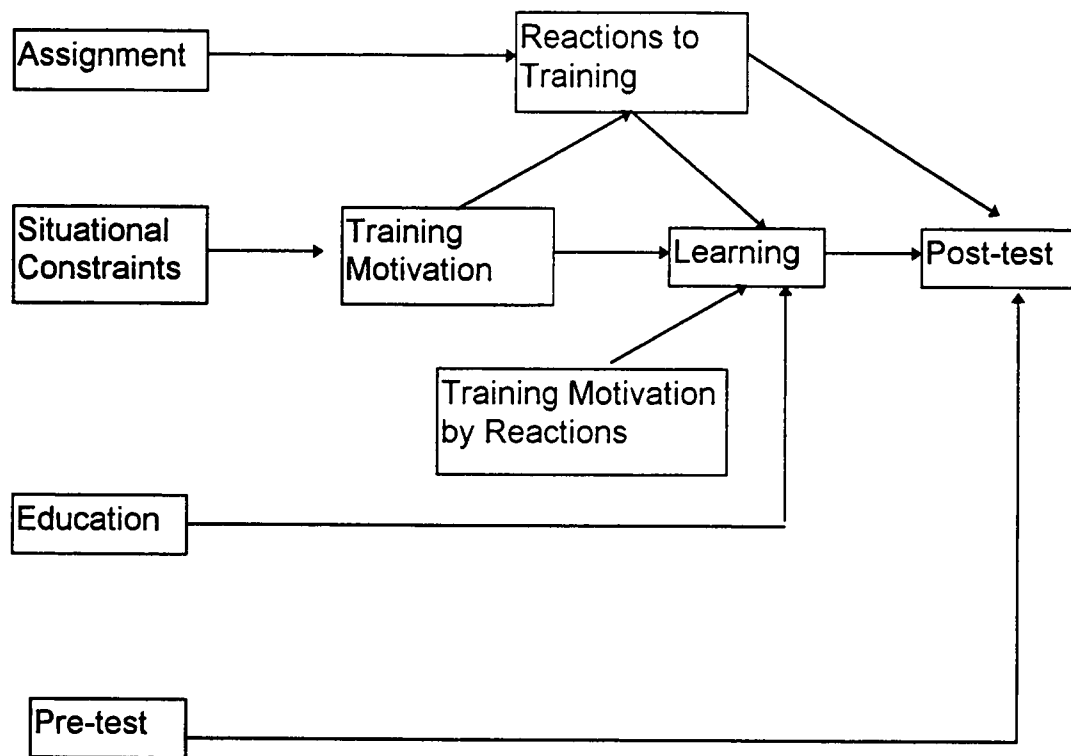


Figure 2.4. Mathieu, Tannenbaum, and Salas' (1992) Revised Model of Training Effectiveness.

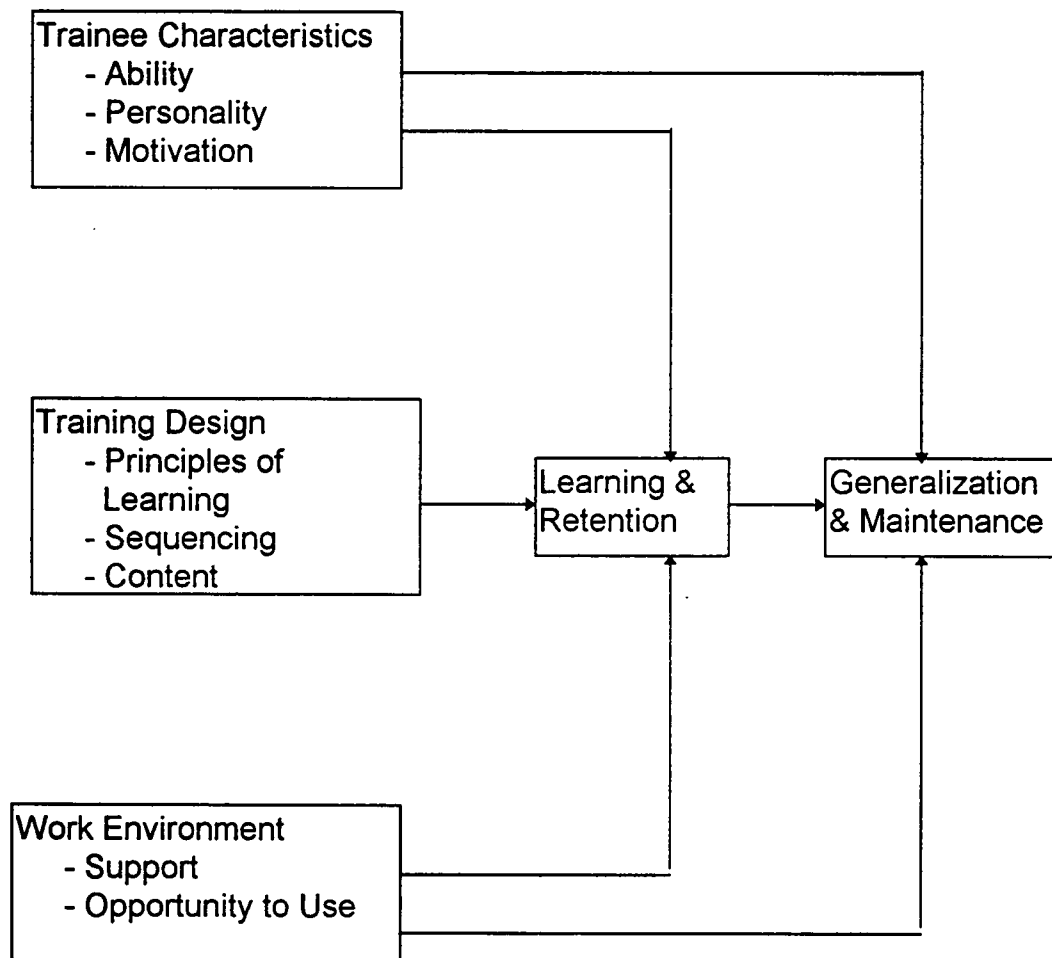


Figure 2.5. Baldwin and Ford's (1988) Model of the Transfer Process.

of the material. Baldwin and Ford review the state of the research on the variables identified as critical to transfer, concluding that research in areas such as individual difference variables, trainee motivation, and supervisor support is limited. Their model of the transfer process has proved critical to the literature on training evaluation.

A more recent model which will be reviewed is that of Noe and Wilk (1993) investigating the factors that influence participation in developmental activities (depicted in Figure 2.6). Although not a model of training effectiveness, it is important to this study, as one of the criteria for workshop effectiveness is participation in developmental activities. Noe and Wilk propose that self-efficacy and work environment characteristics (social support, situational constraints) will influence participation in developmental activities. This relationship is mediated by learning attitudes (motivation to learn, motivation to transfer, evaluation of previous developmental experiences), perceptions of development needs, and perceived benefits from participation. Organizational membership characteristics (position, job tenure, organization tenure) are also expected to influence participation in developmental activities. Preliminary examination of their model indicated that motivation to learn and work environment perceptions did influence participation in developmental activities.

Each of the models described above attempted to identify some of the individual difference variables which influence the effectiveness of a training

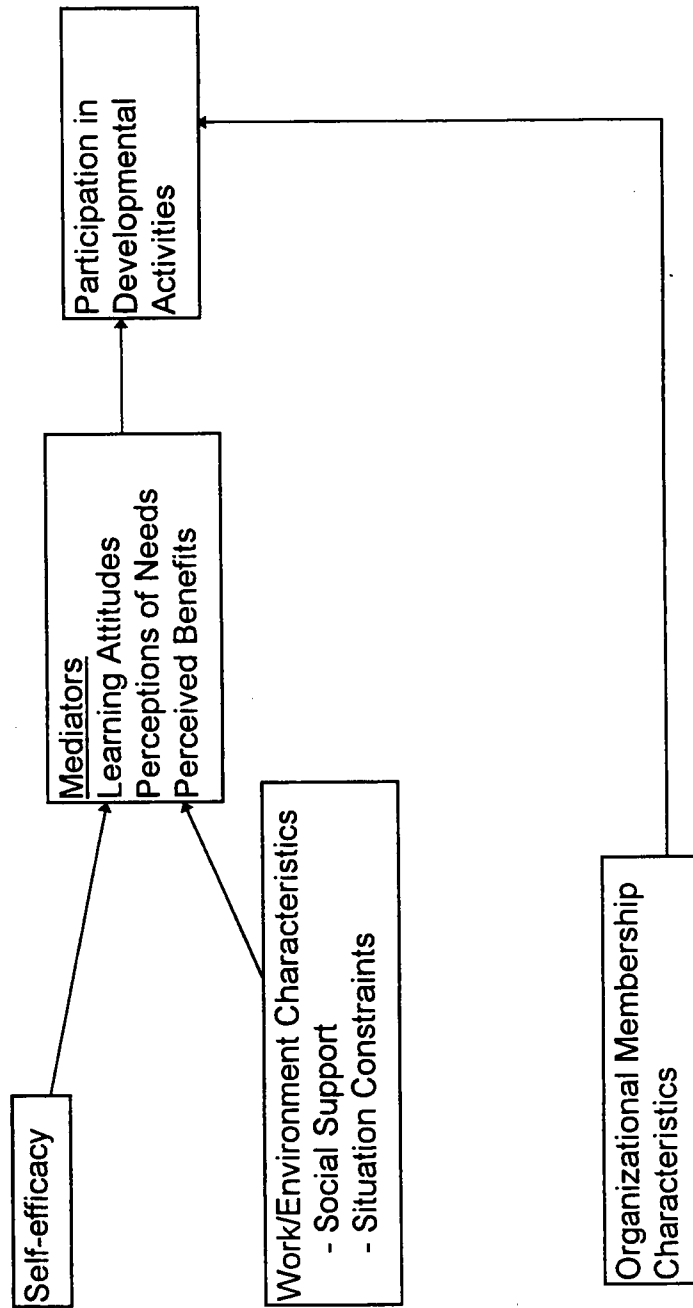


Figure 2.6. Noe and Wilk's (1993) Model for Participation in Development Activities.

program. These models have provided some insight into the appropriate variables to consider when examining the effectiveness of a training program. Therefore, each of these models has been relied on in the determination of the factors to be studied in this investigation of the effectiveness of a career development workshop.

Relationship to Career Development Literature

As this study focuses on a career development workshop, which can be considered a type of training program, it is appropriate to review the training evaluation literature, typical criteria for training programs, and models of training effectiveness. Although the expected benefits of career development programs and training programs differ somewhat, one can identify many similarities, particularly when referring to a career development workshop.

Thus, some of the criteria for the effectiveness of a career development workshop can be grouped with Kirkpatrick's (1959) criteria for training programs, as was shown in Figure 1.1 in Chapter I. In summary, the training criterion of reactions equates to employees' positive reactions to the workshop and perceptions of value. Further, the career development workshop goals which can be equated to Kirkpatrick's learning criterion include increasing self-awareness, increasing knowledge of the organization, increasing knowledge of career goal-setting, and increasing knowledge of development plans. The career development workshop goals which are equivalent to the behavioral

criteria would include identifying career plans, completing development plans, and discussing career goals and plans with one's supervisor. With respect to a career development workshop, organization results would include such indicators as better communication, increased morale, decreased turnover and absenteeism, and improved performance. These organizational measures will not be analyzed in this study due to their global nature, the many variables that can impact them, and the long time frame needed to see changes in the results.

In addition to relying on the literature on training criteria in determining criteria for the effectiveness of a career development workshop, it is also appropriate to partially rely on the training literature in the consideration of individual difference variables which may be related to the effectiveness of a career development workshop. As can be seen in the description of the framework and the rationale for each hypothesis, the training evaluation literature has influenced the selection of variables to be included as antecedents and mediators. Literature on career development supports their inclusion in this context.

In spite of the similarities between a career development workshop and training programs, there are some differences which need to be remembered. Specifically, this workshop is geared towards providing employees with the necessary tools to plan their careers. Most training programs, in contrast, tend to focus on the acquisition of more specific skills, making it easier to determine skill transfer and behavioral changes. The career development workshop does

not teach specific skills as much as it teaches the process of individual development planning, and provides employees with guidelines for their individual development planning process. This difference could make it difficult to detect the transfer of learned behaviors.

Theoretical Framework

The theoretical framework of the study, as depicted in Figure 2.7, proposes several individual difference variables related to the effectiveness of a career development workshop, including job involvement, perceived job insecurity, perceived supervisor support for career development, locus of control, and self-efficacy for engaging in career development behaviors. In addition to these correlates, motivation to learn and motivation to transfer are depicted as mediators in the framework.

The criteria for evaluation of the workshop are drawn from Gutteridge's (1986) indicators of career program effectiveness and are grouped similar to Kirkpatrick's (1959) criteria for training evaluation. Thus, three primary criteria will be used to determine the effectiveness of the workshop - participants' reactions to the workshop, participants' knowledge following the workshop, and participants' behaviors following the workshop. As previously explained, organizational outcomes (e.g., absenteeism, turnover) will not be included as a criteria in this study.

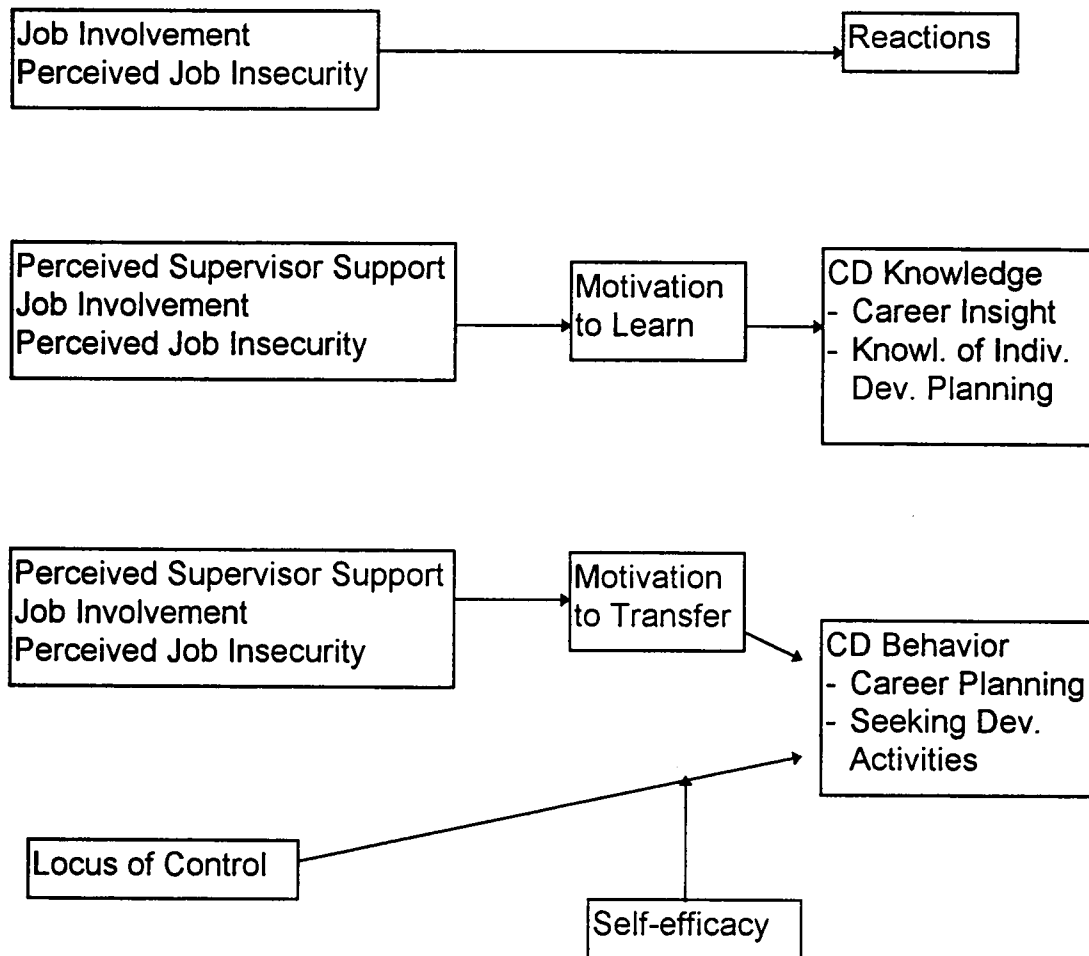


Figure 2.7. A Framework for the Effectiveness of a Career Development Workshop.

Reactions to the workshop will be measured in terms of workshop participants' perceived value or usefulness of the workshop. Two measures of learning will be collected to capture the content of the workshop. Because a large portion of the workshop involves self-assessment of skills, values, and interests, the first learning criteria will be career insight, defined by London and Stumpf (1986) as the dimension of career motivation which focuses on the extent to which people are realistic about themselves and their career goals. Data will also be collected on the extent to which the participant understands the process of individual development planning, the second focus of the workshop.

Two behavioral measures will also be used to evaluate the effectiveness of the workshop. The first measure will be the extent to which the employee actually engages in career planning behavior, that is, the extent to which the employee sets career goals, identifies means of reaching goals, and discusses goals with his or her supervisor. The second behavioral measure will include the extent to which the individual actively seeks out developmental activities which support his or her career goal.

Each of the individual difference variables is proposed to be related to the criteria of career development workshop effectiveness. Job involvement and perceived job insecurity are expected to be related to participants' reactions to the workshop. The relationships between job involvement and learning, perceived job insecurity and learning, and perceived supervisor support and learning are expected to be mediated by motivation to learn. Motivation to learn

is defined as a specific desire to learn the content of the workshop (Noe & Schmitt, 1986) and is proposed to have a direct relationship to learning. Other correlates proposed in the framework are expected to influence learning through their effects on motivation to learn.

The relationships between job involvement, perceived job insecurity, and perceived supervisor support with career development behaviors are expected to be mediated by motivation to transfer. Motivation to transfer is defined as the participant's desire to transfer the learned behaviors to the job (Noe & Schmitt, 1986) and is expected to be directly related to participant's career development behaviors following the workshop. Other variables in the framework (e.g., job involvement, perceived job insecurity, and perceived supervisor support) have an indirect relationship with the career development behaviors through their influence on motivation to transfer. Finally, it is expected that locus of control will be related to behaviors, and that this relationship will be moderated by self-efficacy for engaging in career development behaviors. Rationale for all of these relationships is presented below.

Research Questions and Hypotheses

Before testing the specific hypotheses of this study, several research questions will be examined. As previously discussed, workshop effectiveness will be measured in terms of participants' reactions to the workshop, participants' knowledge of workshop material, and participants' career development

behaviors after the workshop. The first research question to be examined is whether this workshop is effective in terms of these criteria. Specifically, the following research questions will be examined:

Research Question 1a: Do participants have positive reactions to the workshop?

Research Question 1b: Do participants report more career development knowledge following the workshop?

Research Question 1c: Do participants report more career development behaviors following the workshop?

In addition to examining the effectiveness of the workshop, the relationship among the three criteria for workshop effectiveness will be examined. Previous literature in the training area indicates that the suspected hierarchical relationship among the criteria is not supported. In fact, Alliger and Janak (1989) reported that many training evaluation studies have reported different effects of the training on the different levels of evaluation. In examining intercorrelations among the different levels of criteria, Alliger and Janak found preliminary evidence that may suggest that reactions to training are independent of learning and behavior. This study offers an opportunity to extend that research by further examining the relationships among the criteria and by

considering the criteria in the context of a career development program. Thus, the following research question will be explored:

Research Question 2: What is the relationship among the criteria for workshop effectiveness (reactions, learning, and behavior)?

After examining the above two research questions, the specific hypotheses of this study will be tested. Several variables are hypothesized to be related to participants' reactions to the workshop, participants' knowledge/learning in terms of career insight/self-knowledge and knowledge of individual development planning, and participants' career development behaviors in terms of career planning and engagement in developmental activities.

The first variable hypothesized to be related to the indicators of career development workshop effectiveness is job involvement. Lodahl and Kejner (1965) define job involvement as the degree to which a person's work performance affects his or her self-esteem. Most definitions of job involvement refer to the person for whom work is very important and who is affected by his or her work, organization, coworkers, and other facets of the job.

It is expected that job involvement will be positively related to participants' reactions to the workshop because individuals with high job involvement would tend to be more concerned with their careers and perceive career planning workshops to be valuable. It is also expected that participants with high job involvement would have higher motivation to learn material related to career

planning and would have higher motivation to transfer the learned behaviors, because of the important role that work plays in their lives.

Previous research has had mixed results regarding the relationship between job involvement and motivation to learn. When testing their original model, Noe and Schmitt (1986) found a significant correlation between job involvement and motivation to learn, although the path coefficient was not significant. In their test of a model similar to Noe's (1986) model, Deutsch and Barnes-Farrell (1995) did not find support for a proposed path from job involvement to motivation to learn. Although Deutsch and Barnes-Farrell do not provide any explanation for the lack of a significant relationship, it could perhaps be a result of participants not recognizing the potential benefits of the training in terms of job success. Mathieu et al (1992) also failed to find a significant path coefficient between job involvement and training motivation but suggest that this may have resulted from the type of training studied (i.e., they suggest the lack of a significant relationship may have been due to the fact that the proofreading training did not represent an enriched portion of the job). Because it is expected that it will be clear to subjects in this study that attending this workshop could have positive outcomes for their current jobs and future careers, it is expected that job involvement will be related to motivation to learn in this study.

In addition to previous literature on the relationship between job involvement and motivation to learn, there is also some preliminary evidence suggesting that job involvement is related to outcome measures similar to the

knowledge and behavior measures included in this study. In their test of a model of training effectiveness, Noe and Schmitt (1986) found that job involvement was an important antecedent to both learning and career planning behavior. Noe et al (1990) found that work role salience (a construct similar to job involvement in terms of the perceived importance of work) was correlated with career insight, one of the learning measures included in this study, and was a significant predictor of career insight when entered into a regression equation with other variables under study. Kozlowski and Hults (1987) found that job involvement was correlated with challenging job assignments, a form of developmental activity. Finally, Maurer and Tarulli (1994) found that job involvement was related to past participation in voluntary developmental activities, intentions for future participation in developmental activities, and interest and motivation in participating in developmental activities. Thus, the following hypothesis is proposed.

Hypothesis 1a: Job involvement will be positively related to participants' reactions to a career development workshop.

Hypothesis 1b: Motivation to learn will mediate a positive relationship between job involvement and career development knowledge after participating in a career development workshop.

Hypothesis 1c: Motivation to transfer will mediate a positive relationship between job involvement and career development behaviors after participating in a career development workshop.

Another variable proposed to be related to the effectiveness of a career development workshop is perceived job insecurity. As organization environments become more unstable, so too will organizations and jobs become more unstable. As Dewhirst (1991) recognized, there will be decreasing opportunities for upward mobility due to the slower growth of organizations. The rapid rate of change in organizations and their environments increases the probability that employees will experience job instability (Minor, Slade, & Myers, 1991; Nicholson & West, 1988). This lack of job security has been shown to be related to several variables, including effort, intention to turnover, resistance to change, health/stress/anxiety, and job satisfaction (Cole, 1987; Greenhalgh & Rosenblatt, 1984; Kuhnert & Palmer, 1991; Kuhnert, Sims, & Lahey, 1989).

The relationship between perceived job insecurity and career development programs has received little attention in the literature. In this study, it is expected that perceived job insecurity will be related to the effectiveness of the career development workshop because it is believed that those individuals who believe their jobs are in jeopardy will have favorable reactions to the workshop and will perceive it to be more valuable, will have higher motivation to learn about themselves and development planning, and will

have higher motivation to transfer the career development behaviors in order to take control over their careers in an unstable environment. These expectations are partially supported by Stumpf et al's (1983) finding that one's employment outlook was correlated with several measures of career exploration. Thus, fear of being without a job is expected to be a motivator for taking personal responsibility for one's own career.

Hypothesis 2a: Perceived job insecurity will be positively related to participants' reactions to a career development workshop.

Hypothesis 2b: Motivation to learn will mediate a positive relationship between perceived job insecurity and career development knowledge after participating in a career development workshop.

Hypothesis 2c: Motivation to transfer will mediate a positive relationship between perceived job insecurity and career development behaviors after participating in a career development workshop.

Perceived supervisor support for career development is also predicted to be related to career workshop effectiveness. As Leibowitz et al (1986) explained, supervisors may communicate the value of career development activities and help employees in the career development process. As supervisor support is critical for the achievement of a career plan, it is expected to be

critical to participants' motivation to learn the information and transfer the behaviors. If supervisors are not perceived to be supportive of career development, the employee would be unlikely to risk engaging in career development activities.

Several previous studies have demonstrated the important role of supervisor support in the career development process . Both Deutsch and Barnes-Farrell (1995) and Fecteau, Dobbins, Russell, Ladd, and Kudisch (1995) found a positive relationship between supervisor support and pre-training motivation. It should be noted that Deutsch and Barnes-Farrell did not find significance but stated that the coefficient was high enough for the path to be plausible. Noe et al (1990) and London (1993) provide evidence of a relationship between supervisor support for career development and career insight, one of the learning measures included in this study. Kozlowski and Hults (1987) found that supervisor support was significantly correlated with several career development behaviors in response to an updating climate. Noe and Wilk (1993) found that perceptions of work environments (which included manager support) influenced participation in developmental activities. Finally, Maurer and Tarulli (1994) found a positive relationship between supervisor support and previous participation in voluntary development activities, intended future participation in such activities and interest and motivation in such activities. Thus, it is hypothesized that perceived supervisor support for career

development will be related to career development workshop effectiveness through a relationship with motivation to learn.

Hypothesis 3a: Motivation to learn will mediate a positive relationship between perceived supervisor support for career development and career development knowledge after participating in a career development workshop.

Hypothesis 3b: Motivation to transfer will mediate a positive relationship between perceived supervisor support for career development and career development behaviors after participating in a career development workshop.

The last correlate proposed in this study is locus of control. Individuals with an external locus of control tend to believe that events are due to luck, chance, or fate, while individuals with an internal locus of control tend to believe that events are contingent upon his or her own behavior (Rotter, 1966). Paulhus (1983) identifies personal efficacy, control over the nonsocial environment as in personal achievement, as one of the dimensions of personal control. Career development in general, and this workshop in particular, emphasizes taking personal responsibility for one's career. Thus, it is expected that individuals who believe they have personal control over events and their careers are more likely to engage in career development behaviors.

Some recent studies have examined the role of locus of control in models of training effectiveness. Noe and Schmitt (1986) proposed a path in their model

of training effectiveness from locus of control to career planning and exploratory behaviors. Support was not found for this hypothesis, perhaps due to the type of training program studied (interpersonal skills training for educators). The career development workshop which is the focus of this study emphasizes the importance of taking personal responsibility for your own career. Thus, it is likely that an individual who has an internal locus of control would engage in more career planning and developmental activities in an effort to take control of their career. This argument is not as strong for the interpersonal skills training studied by Noe and Schmitt because it most likely did not place the same emphasis on personal responsibility. Although the interpersonal skills training would perhaps assist a person on the job and therefore be job relevant, there is no reason to expect that a person with an internal or external locus of control would have different beliefs about the value of such training. However, when the training consists of material which largely focuses on individual responsibility and the necessity for an individual to take control of his or her own career, it is more likely that locus of control would be a factor.

Other studies have provided evidence that locus of control is an important variable in the career planning and development process. Noe and Steffy (1987) did find that locus of control was correlated with the extent of career planning and career exploration. In addition, Gould (1979) found that internals reported engaging in more career planning. Therefore, locus of control is expected to be related to career development behaviors.

Hypothesis 4a: Locus of control will be positively related to career development behaviors such that individuals with a more internal locus of control will be more likely to demonstrate career development behaviors after participating in a career development workshop.

Finally, it is expected that self-efficacy for career development will moderate the relationship between locus of control and career development behaviors. Self-efficacy refers to one's belief in his or her capability to perform a task (Bandura, 1977). In this case, self-efficacy will refer to the participant's belief that he or she can successfully engage in career planning and developmental activities in support of his or her career goal. It is expected that the relationship between locus of control and career development behaviors will be stronger when individuals have high self-efficacy for engaging in career development behaviors. In support of this hypothesis, Noe and Wilk (1993) did find that self-efficacy had an effect on a self-report measure of development activity.

Hypothesis 4b: Self-efficacy will moderate the relationship between locus of control and career development behaviors such that the relationship between locus of control and the career development behaviors will be stronger to the extent that the individual has high

self-efficacy for engaging in career development behaviors.

Summary of Hypotheses

Listed below is a summary of the two research questions and each hypothesis to be studied:

Research Question 1

- a: Do participants have positive reactions to the workshop?
- b: Do participants report more career development knowledge following the workshop?
- c: Do participants report more career development behaviors following the workshop?

Research Question 2

- a: What is the relationship among the criteria for workshop effectiveness (reactions, learning, and behaviors)?

Hypothesis 1

- a: Job involvement will be positively related to participants' reactions to a career development workshop.

- b: Motivation to learn will mediate a positive relationship between job involvement and career development knowledge after participating in a career development workshop.
- c: Motivation to transfer will mediate a positive relationship between job involvement and career development behaviors after participating in a career development workshop.

Hypothesis 2

- a: Perceived job insecurity will be positively related to participants' reactions to a career development workshop.
- b: Motivation to learn will mediate a positive relationship between perceived job insecurity and career development knowledge after participating in a career development workshop.
- c: Motivation to transfer will mediate a positive relationship between perceived job insecurity and career development behaviors after participating in a career development workshop.

Hypothesis 3

- a: Motivation to learn will mediate a positive relationship between perceived supervisor support for career development and career development knowledge after participating in a career development workshop.

- b: Motivation to transfer will mediate a positive relationship between perceived supervisor support for career development and career development behaviors after participating in a career development workshop.

Hypothesis 4

- a: Locus of control will be positively related to career development behaviors such that individuals with a more internal locus of control will be more likely to demonstrate career development behaviors after participation in a career development workshop.
- b: Self-efficacy will moderate the relationship between locus of control and career development behaviors such that the relationship between locus of control and the behaviors will be stronger to the extent that the individual has high self-efficacy for engaging in career development behaviors.

The focus of this study is to examine the individual difference variables related to career development workshop effectiveness. Several variables are hypothesized to be related to participants' reactions to the workshop (i.e., perceived value), participants' knowledge (i.e., career insight/self-knowledge and knowledge of the individual development planning process), and participants' behaviors (i.e., career planning and seeking developmental

activities). The proposed correlates include job involvement, perceived job insecurity, perceived supervisor support for career development, and locus of control. Each of these variables is expected to be related to the measures of effectiveness.

More specifically, job involvement and perceived job insecurity are hypothesized to be related to participants' reactions to the career development workshop. Job involvement, perceived job insecurity, and perceived supervisor support for career development are hypothesized to be related to participants' career development knowledge after participating in a career development workshop through their relationship with motivation to learn. In addition, job involvement, perceived job insecurity, and perceived supervisor support for career development are hypothesized to be related to participants' career development behaviors after participating in a career development workshop through their relationship with motivation to transfer. Finally, locus of control is hypothesized to be related to participants' career development behaviors, and the relationship is hypothesized to be moderated by self-efficacy for engaging in career development behaviors.

In addition to the hypotheses outlined above, two research questions will be examined. First, the effectiveness of the workshop will be examined, expecting participant reactions to be high and knowledge and behavior to be higher after participation in the workshop. The second research question involves the relationship among the criteria. Specifically, intercorrelations

among reactions, knowledge, and behavior will be examined to determine the relationships among these criteria.

This study will be one of the first attempts to determine the factors related to the effectiveness of a career development workshop and to understand why a career development workshop may or may not be effective. This study will also be one of the first that incorporates the training evaluation literature into the field of career development. Most importantly, the results of this study will be a critical step in understanding the process by which a career development workshop achieves its objectives. The study will allow a better understanding of what variables are related to the effectiveness of the workshop, in terms of reactions, knowledge, and behaviors, and how these relationships occur.

CHAPTER III

METHODOLOGY

Sample

Original Sample

The sample for this study consisted of 320 employees in one division of a large Southeastern utility company who participated in a career development workshop between July 1994 and February 1995. Participation in the workshop was completely voluntary. Data was collected using several surveys, a pre-test, post-test and follow-up survey completed by participants and a pre-test and follow-up survey completed by participants' supervisors. The procedure for distributing these surveys and the content of each is described under the data collection section of this chapter. Of the 320 participants in the study, 277 completed a pre-test for a response rate of 86.6%, 308 completed a post-test for a response rate of 96.3%, and 52 completed the follow-up survey for a response rate of 16.3%. For the 262 supervisor surveys distributed, 139 pre-tests were returned (response rate of 43.4%) and 43 follow-up surveys were returned (response rate of 13.4%). Surveys were considered unusable if they could not be matched (e.g., if there was a pre-test without a post-test or follow-up or vice versa) or if the research items were not answered (e.g., surveys on which trainer evaluation data was provided but no other items were completed). After elimination of unusable surveys, this resulted in 252 participant pre-tests, 247

participant post-tests, 36 participant follow-up surveys, 106 supervisor pre-tests, and 29 supervisor follow-up surveys.

Due to the low response rate on the supervisor surveys, there were only 17 pairs of supervisor responses (e.g., only 17 with both a pre-test and follow-up). Several potential explanations exist for this low response rate. For example, it is possible that participants in the workshop did not give the survey to their supervisors, perhaps because they did not want to inconvenience the supervisor, they did not interact frequently with their supervisor, they did not believe their supervisor had adequate information to respond to the survey, they did not see any value in the survey, etc. It is also possible that, upon receiving the survey, supervisors did not respond for many of these same reasons (e.g., they did not believe they had enough information to respond). Finally, because there was much organizational restructuring occurring at the time of this research, it is possible that many participants did not have an official supervisor at that time or had a new supervisor who would not be able to respond to the survey. Because it was felt that 17 pairs of supervisor surveys would not be sufficient for meaningful data analysis, the supervisor surveys were not used in this study.

Final Sample

The final sample on which all data analysis is based included 252 participants in the workshop, 247 of whom completed both the pre-test and post-

test and 36 of whom completed both the pre-test and follow-up survey. All 252 participants remained in the sample (as opposed to using only the 247 who had a pre-test and post-test) because there were some subjects who completed a follow-up but not a post-test. In order to maintain maximum sample size for follow-up measures, the five subjects who completed a follow-up but not a post-test were kept in the sample. A power analysis was conducted using the formulas presented by Cohen (1988) to detect a medium effect size. The power analysis indicated that there was sufficient power to detect the hypothesized mediated relationships for the learning variables (power=.99) but the power for detecting the hypothesized mediated relationships for the behavior measures was very low (power=.48).

Of the sample of 252 workshop participants, 50.0% were male and 83.3% were white. The average age of the participants was 42.6 years (SD = 8.5) with an average job tenure of 7.08 years (SD = 6.8) and an average organization tenure of 14.38 years (SD = 7.06).

There are several advantages to using this sample. First, because this study was conducted within an organization, the workshop and the information presented was very real to the subjects. Second, because the workshop was offered to employees at different levels in the organization and in many different fields (e.g., engineering, finance, scientific research, human resources, skilled laborers), generalizability should be enhanced. Also, there should be adequate variance in most of the individual difference measures because subjects were

from a variety of departments and should experience genuine differences in job security, supervisor support, etc. However, because participation in the workshop was voluntary, some of the measures may suffer from lack of variance (e.g., motivation to learn).

Because there was so much attrition in the study, t-tests were conducted to determine if there were any differences between those who completed the follow-up survey and those who did not. Figure 3.1 presents abbreviations for each measure to assist in the interpretation of tables in Chapters III and IV. As can be seen in Table 3.1, the only significant difference between the two groups was on the self-efficacy measure. Specifically, participants who completed the follow-up survey reported lower levels of self-efficacy for career development.

In addition to analyses to determine whether there were differences between those who did and did not complete the follow-up survey, analyses were also conducted to determine whether the workshop participants were representative of the employees in this organization. At the conclusion of the workshops conducted for purposes of this study, a survey was sent to a random sample of 500 employees in the same division of the organization who had not attended the workshop. Surveys were returned from 179 subjects for a response rate of 35.8%. Table 3.2 presents t-tests comparing the mean scores of the experimental group and the comparison group on the individual difference

LIST OF ABBREVIATIONS

Variable	Abbreviation
Job Involvement	JOBINV
Perceived Job Insecurity	INSEC
Perceived Supervisor Support for Career Development	SUP
Locus of Control	LOCUS
Motivation to Learn	MTL
Motivation to Transfer	MTT
Self-efficacy for Career Development Behaviors	EFF
Reactions	REAC
Career Insight	
Pre-test	PRE-INS
Post-test	POST-INS
Knowledge of Individual Development Planning	
Pre-test	PRE-IDP
Post-test	POST-IDP
Career Planning	
Pre-test	PRE-CP
Post-test	POST-CP
Seeking Developmental Activities	
Pre-test	PRE-DA
Post-test	POST-DA

Figure 3.1. An Explanation of the Abbreviations Used in Chapter III and IV.

Table 3.1

T-tests for Completion of Follow-up Survey

Variable	Mean		t value
	Completed Follow-up (n=36)	Did Not Complete Follow-up (n=216)	
Career Insight (Pre)	3.79	3.67	-1.09
Knowledge of Indiv Dev Planning (Pre)	2.72	2.82	.95
Career Planning (Pre)	2.69	2.90	1.85
Seeking Dev Activ (Pre)	3.28	3.37	.70
Motivation to Learn	3.97	4.06	.77
Job Insecurity	3.05	3.18	.85
Supervisor Support	3.46	3.27	-1.40
Job Involvement	3.09	2.98	-.82
Locus of Control	3.77	3.70	-.76
Career Insight (Post)	4.11	4.03	-.95
Knowledge of Indiv Dev Planning (Post)	3.90	4.01	1.22
Motivation to Transfer	4.27	4.31	.43
Self-efficacy	3.58	3.81	2.09*
Reactions	4.13	4.21	.71
Age	42.53	42.61	.05
Sex	1.43	1.50	.83
Job Tenure	7.82	6.95	-.63
Organization Tenure	13.97	14.45	.36

Table 3.2

T-tests for Experimental vs. Control Group

Variable	Mean		t value
	Experimental Group (n=252)	Comparison Group (n=179)	
Career Insight (Pre)	3.68	4.05	5.91***
Knowledge of Indiv Dev Planning (Pre)	2.81	3.16	4.93***
Career Planning (Pre)	2.87	3.28	5.24***
Seeking Dev Activ (Pre)	3.36	3.38	.31
Job Insecurity	3.16	3.15	-.14
Supervisor Support	3.30	3.40	1.27
Job Involvement	3.00	3.04	.72
Locus of Control	3.71	3.65	-1.23
Age	42.59	43.57	1.26
Sex	1.49	1.36	-2.82**
Job Tenure	7.07	6.06	-1.5
Organization Tenure	14.38	15.85	2.13*

variables, pre-test measures of knowledge and behavior and demographic variables. As can be seen in this table, there are no significant differences between the groups on the individual difference variables suggesting that the experimental group was representative of the employees in this division in terms of job involvement, perceived job insecurity, perceived supervisor support for career development, and locus of control. The comparison group, however, does have a significantly higher mean on the pre-test measures of career insight, knowledge of individual development planning, and career planning. There were also more men in the comparison group.

Procedure

Description of the Workshop

All subjects were participants in a career development workshop titled Individual Development Planning (IDP) workshop. The workshop was a voluntary session advertised through fliers that went out to all employees in company mail, communications in various memos, and verbal endorsements by managers. The workshop was an eight-hour session with four primary modules: self-assessment, goal-setting, development planning, and action. All subjects participated in all modules of the workshop. This workshop was a slightly modified version of the Workteam Advantage® workshop marketed by Conceptual Systems Inc.

In the self-assessment module, subjects completed a variety of activities to increase their understanding of their strengths, development needs, interests, and values. Most of these activities were completed prior to the workshop, others were completed in the course of the workshop. Activities included self-assessment of skills, prioritization of strengths and developmental needs, Holland's Self-Directed Search (Holland, 1970, 1990), and a Values Inventory (Conceptual Systems Inc., 1992, 1993). Each activity was thoroughly debriefed in the workshop and implications for career planning were discussed.

The second module dealt with goal-setting. Subjects first went through a series of exercises to determine important organizational information. They were also provided with suggestions on how and where to obtain other organizational information and information on particular jobs or occupations. Different development options that should be explored were described, including improving skills, staying current in one's job, enriching the current job, and preparing for future directions. Participants were then encouraged to use the self-assessment and organizational information to identify at least one career goal that aligned their interests with organizational needs. They were encouraged to use the information after the workshop, when they would have more time to identify several career goals.

Development planning, the third module, encouraged participants to identify the supporting and restraining forces that impact the attainment of their career goal. Participants then identified specific actions to be taken to help them

reach the career goal they identified in the workshop. The last module of the workshop, taking action, provided tips for taking action on career goals, with emphasis placed on conducting career discussions with one's supervisor.

Data Collection

All employees in this division of the organization were sent a flier providing a brief description of the workshop and the dates and locations of the workshop. If interested in attending a workshop, employees returned the flier to the division's training administrator with the appropriate workshop marked. Employees were scheduled for workshops on a first come, first serve basis. When workshops were full, a waiting list was started and employees were called with alternate dates of available workshops.

Data was collected in three phases, a pre-test, post-test, and follow-up survey. Participants were told that the surveys were part of an evaluation effort of the workshop intended to ensure that the workshop was meeting the needs of the organization and employees. The pre-test was sent to subjects approximately two weeks prior to attending the workshop. Post-tests were given to subjects at the conclusion of the workshop, and follow-up surveys were sent three to six months after the workshop. Anonymity and confidentiality were assured for each survey. Figure 3.2 lists each variable along with the survey which was used to collect the data.

Construct	Measured at Pre-Test	Measured at Immediate Post-test	Measured at Follow-up (3-6 mos. later)
Job Involvement	X		
Perceived Job Insecurity	X		
Perceived Supervisor Support	X		
Locus of Control	X		
Motivation to Learn	X		
Motivation to Transfer		X	
Self-efficacy		X	
Participants' Reactions		X	
Participants' Knowledge	X	X	
Participants' Behaviors			
Self-ratings	X		X
Supervisor Ratings	X		X

Figure 3.2. The Point of Measurement for Each Construct

When employees were enrolled in a workshop, they were sent a confirmation letter, pre-workshop assignments, pre-tests, and a form for their supervisor. They were instructed to complete the pre-test prior to completing any pre-workshop assignments, and to either bring the completed pre-test to the workshop or send it directly to the researcher. Pre-tests were collected from all subjects prior to beginning the workshop. The pre-test included measures of locus of control, perceived supervisor support for career development, perceived job insecurity, job involvement, motivation to learn, and reported levels of the knowledge and behavior measures (career identity/self-knowledge, knowledge of individual development planning, career planning, and seeking developmental activities.) The supervisor form included items related to the supervisor's perception of whether the employee was engaging in career development behaviors. Workshop participants were instructed to give the form to their supervisor, and supervisors were instructed to complete the form and return it directly to the researcher.

The post-test was given to subjects at the conclusion of the workshop and was collected from subjects before they left the workshop. The post-test included measures of reactions to the workshop, reported levels of career identity/self-knowledge, reported levels of knowledge of individual development planning, and self-efficacy for engaging in career development behaviors.

Three to six months after the workshop, subjects were sent a follow-up questionnaire through company mail. The follow-up included measures of

reported levels of career planning and seeking developmental activities.

Subjects were also sent a follow-up questionnaire to be given to their supervisor which included items on supervisor perceptions of whether the participant was engaging in career development behaviors. Supervisor measures of knowledge were not collected because much of the information learned in the workshop, especially career insight/self-knowledge, would not be observable by others. Follow-up questionnaires were returned directly to the researcher. Changes in organizational structure and leadership made it impossible to take efforts to increase the response rate on the follow-up survey, as resistance to research efforts had become very high in the organization.

Measures

Unless otherwise stated, all items were rated on a five point Likert scale (1 = strongly disagree to 5 = strongly agree.) Most measures are adapted from scales used in previous research. Adaptations were necessary to meet space limitations on the survey and to make the items more relevant to this workshop. The following pages present the measures as originally defined. However, analysis of the psychometric properties of the data resulted in changes in some of the scales. Therefore, a final list of items in each scale is presented in the Appendix.

Individual Difference Variables

Job Involvement. Job involvement was measured in the pre-test with ten items from Lodahl and Kejner's (1965) job involvement scale (see Figure 3.3). Higher scores on the scale indicate higher job involvement. Sample items include: "I am very much involved personally in my work"; "The major satisfaction in my life comes from my job." Lodahl and Kejner report corrected split-half reliabilities from .72 to .89 for their 20-item scale. Noe and Steffy (1987) report an internal consistency reliability of .67 for the full scale. Noe and Schmitt (1986) used a seven-item version of the scale and report internal consistency reliability of .64. In addition, Mathieu et al (1992) report an internal consistency reliability of .75 for their four-item version of the Lodahl and Kejner scale.

Perceived Job Insecurity. Six items similar to those of the job permanence subscale of the Job Security Survey (Lahey, 1984) used by Kuhnert and Palmer (1991) and Kuhnert, Sims, and Lahey (1989) were used in the pre-test to measure perceived job insecurity (see Figure 3.4). Sample items include: "I'm not sure how long my job will last"; "I believe my current position may be in jeopardy." High scores on the scale indicate high perceived job insecurity. In previous research, internal consistency reliability estimates for the Job Security Survey were .85 and .90 (Kuhnert et al, 1989; Kuhnert & Palmer, 1991).

Perceived Supervisor Support for Career Development. Perceived supervisor support for career development was measured in the pre-test with

1. The major satisfaction in my life comes from my job.
2. The most important things that happen to me involve my job.
3. I am very much involved personally in my work.
4. There is purpose to my life, and my work is a meaningful part of that purpose.
5. I live, eat, and breathe my job.
6. Sometimes I lie awake at night thinking ahead to the next day's work.
7. I'll stay overtime to finish a job, even if I'm not paid for it.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.3. Items Measuring Job Involvement; Lodahl and Kejner, 1965.

1. I am afraid of losing my job.
2. I'm not sure how long my job will last.
3. I worry about losing my job.
4. I believe my current position may be in jeopardy.
5. I believe I may lose my current position in the near future.
6. It is probable that my current position may not last long.

Note: Items are rated on a five-point scale (1 = strongly agree to 5 = strongly disagree).

Figure 3.4. Items Measuring Perceived Job Insecurity; adapted from Kuhnert et al, 1989 and Kuhnert and Palmer, 1991.

seven items modeled after items used by Noe et al (1990) and Noe and Wilk (1993) (see Figure 3.5). The scale included items such as: "My supervisor is supportive of my efforts to acquire new knowledge"; "My supervisor supports me in my individual development planning." Higher scores indicate higher supervisor support for career development. Noe et al (1990) report an internal consistency reliability of .91 for the ten item scale they used to assess supervisor support. Noe and Wilk (1993) used 24 items to assess managerial and peer support, and report an internal consistency reliability of .93.

Locus of Control. Locus of control was measured in the pre-test with ten items from the Paulhus (1983) personal efficacy subscale of the Spheres of Control Scale (see Figure 3.6). High scores on the scale indicate an internal locus of control. Sample items include: "In the long run, people get the respect they deserve in the world"; "In my case, getting what I want has little or nothing to do with luck." Paulhus (1983) reports typical coefficient alpha reliabilities of .75 to .80 on cross-validation samples.

Potential Mediating and Moderating Variables

Motivation to Learn. Motivation to learn was measured with four items on the pre-test similar to those used by Baldwin, Magjuka, and Loher (1991), Noe and Schmitt (1986), and Noe and Wilk (1993) (see Figure 3.7). Sample items include: "I am willing to exert considerable effort in learning this material"; "I will strive to learn all I can about career management." High scores indicate higher

1. My supervisor spends time helping me with career planning.
2. My supervisor is supportive of my efforts to acquire new knowledge.
3. My supervisor encourages me to learn new things.
4. My supervisor supports me in my individual development planning.
5. My supervisor is interested in my career planning efforts.
6. My supervisor is willing to spend time helping with my career planning.
7. My supervisor encourages me to set career goals.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.5. Items Measuring Perceived Supervisor Support for Career Development; adapted from Noe et al, 1990 and Noe and Wilk, 1993.

1. When I get what I want it's usually because I worked hard for it.
2. When I make plans I am almost always certain to make them work.
3. I prefer games involving some luck over games requiring pure skill.
4. I can learn almost anything if I set my mind to it.
5. My major accomplishments are almost entirely due to my hard work and ability.
6. I usually don't set goals because I have a hard time following through on them.
7. Competition discourages excellence.
8. Often people get ahead just by being lucky.
9. On any sort of exam or competition I like to know how well I do relative to everyone else.
10. It's pointless to keep working on something that's too difficult for me.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.6. Items Measuring Locus of Control; Paulhus, 1983.

1. I am willing to exert considerable effort in learning this material.
2. I am motivated to learn everything I can about career management.
3. It is very important to me that I learn a lot from this workshop.
4. I will strive to learn all I can about career management.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree.)

Figure 3.7. Items Measuring Motivation to Learn; adapted from Baldwin et al, 1991, Noe and Schmitt, 1986, and Noe and Wilk, 1993.

motivation to learn from the workshop. Noe and Schmitt (1986) combined their 8-item measure of motivation to learn with measures of expectations regarding effort-performance and performance-outcomes linkages into a 21-item measure of pre-training motivation which had an internal consistency reliability of .98. Noe and Wilk (1993) report an internal consistency reliability estimate of .81 for their seventeen item measure of motivation to learn. Baldwin et al (1991) used seven items and report a reliability of .81.

Motivation to Transfer. Four items adapted from Noe and Schmitt (1986) and Noe and Wilk (1993) were used to assess motivation to transfer (see Figure 3.8). Sample items include: "I plan to use what I learned in order to do my individual development planning"; "I am motivated to use the workshop information for my career planning." High scores indicate higher motivation to transfer the information learned in the workshop. Noe and Wilk (1993) report an internal consistency reliability estimate of .68 for their seven item measure.

Self-efficacy for Career Development. Self-efficacy for career development was measured with four items in the post-test which were based on items used by Noe and Wilk (1993) (e.g., "I am confident in my ability to do individual development planning"; "I expect to be successful in my career planning process.") Items were written in order to be specific to career development (see Figure 3.9). High scores on this scale indicate higher self-efficacy for career development. Noe and Wilk (1993) report an internal

1. I plan to use what I learned in order to do my individual development planning.
2. I will apply what I learned in this workshop when writing career goals and plans.
3. My purpose for participating in this workshop was to learn material that I can use in my career planning.
4. I am motivated to use the workshop information for my career planning.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.8. Items Measuring Motivation to Transfer; adapted from Noe and Schmitt, 1986 and Noe and Wilk, 1993.

1. I am confident in my ability to do individual development planning.
2. I expect to be successful in my career planning process.
3. I consider myself to be skilled in development planning.
4. I am confident in my ability to plan my career.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.9. Items Measuring Self-efficacy for Career Development; adapted from Noe and Wilk, 1993.

consistency reliability estimate of .81 for their thirteen item measure based on Pond and Hay (1989).

Outcome Variables

Reactions to the Workshop. Four items similar to those of Mathieu et al (1992) were used to measure participants' reactions to the career development workshop on the post-test (see Figure 3.10). Sample items include: "Overall, my reaction to this workshop was very positive"; "This workshop was a good use of my time." More positive reactions to the workshop are reflected in higher scores on this scale. Mathieu et al (1992) report an internal consistency estimate of .81 for their 11-item scale.

Career Development Knowledge. Two measures of self-reported career development knowledge were used to reflect the learning objectives of the workshop, career insight/self-knowledge and knowledge of individual development planning. Career development knowledge was measured in the pre-test and post-test. The post-test was regressed on the pre-test to obtain a residualized score which was then used as an adjusted knowledge measure in all analyses. Career insight was measured with four items similar to those used by Noe et al (1990) and London (1993) (see Figure 3.11). Sample items include: "I have a good feel for my career interests"; "I know specifically what my skills, values, and interests are." High scores indicate higher career insight/self-knowledge. Noe et al (1990) report an internal consistency reliability estimate of

1. I enjoyed the content of this workshop.
2. Overall, my reaction to this workshop was very positive.
3. This workshop was a good use of my time.
4. I would recommend this workshop to others.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.10. Items Measuring Reactions to the Workshop; adapted from Mathieu et al, 1992.

1. I know specifically what my skills, values, and interests are.
2. I have a good feel for my career interests.
3. I know exactly what my interests are.
4. I know specifically in what areas I need development.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.11. Items Measuring Career Insight; adapted from Noe et al, 1990.

.76 for their eight item scale and London (1993) reports an internal consistency reliability estimate of .85 for his five item measure. Knowledge of individual development planning was measured with four items developed to reflect the learning objectives of the workshop (see Figure 3.12). Sample items include: "I understand the individual development planning process"; "I feel prepared to write my individual development plan." High scores indicate greater knowledge of the individual development planning process.

Although knowledge tests are generally preferable to the use of self-reported knowledge measures, it was felt that self-report of career insight and knowledge of individual development planning would be appropriate in this case. First, with respect to career insight, the goal of the workshop was not to provide participants with exact information regarding their strengths, development needs, and interests as this would be impossible in such a short time period. Instead, the goal was to assist subjects in beginning the process of self-exploration and to give them some initial knowledge or insight about themselves. Thus, self-reported knowledge seemed appropriate in this case. Similar considerations were involved in the decision to use self-reported knowledge of individual development planning. Again, this workshop was not designed to give participants specific skills in this area but to expose them to a development planning process that they could use to assist them in the development of a career plan. Trainers were less concerned with whether participants gained specific, testable knowledge and more concerned with whether participants

1. I understand the individual development planning process.
2. I feel prepared to write my individual development plan.
3. I know how to take action on my career goals.
4. I know how to identify my career goals/interests.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.12. Items Measuring Knowledge of Individual Development Planning.

understood and saw the value in such a process so that they would be able to take the materials with them and privately create a more comprehensive, structured career or development plan.

Similar self-report measures have been used in previous research. For example, Hicks and Klimoski (1987) used a self-report post-test measure of the degree to which subjects felt they learned various topics in a training program on performance reviews and interviewing. More recently, Deutsch and Barnes-Farrell (1995) measured learning with self-report items on how much participants believed they learned from training that they attended. Because it was felt that a similar methodology would be appropriate in this study, self-report was used as the measure of knowledge in terms of career insight and knowledge of individual development planning.

Career Development Behaviors. Two scales were used to measure career development behaviors, career planning and seeking developmental activities. Career development behaviors were measured at the pre-test and follow-up by both the participant and the participant's supervisor. Similar to the knowledge measures, the post-test measure of the behavior was regressed on the pre-test to obtain a residual score. The residual score was then used in the analyses as an adjusted behavior measure. Career planning was measured with six items similar to Gould's (1979) measure of career planning (see Figure 3.13). Sample items include: "I have a specific plan for my career"; "I know exactly what I need

1. I have spent a lot of time planning my career.
2. I have spent a lot of time considering my career goals.
3. I have decided what my career objectives are.
4. I have a specific plan for my career.
5. I know exactly what I need to do to reach my career goals.
6. My career objectives are very clear to me.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.13. Items Measuring Career Planning; adapted from Gould, 1979.

to do to reach my career goals." High scores indicate higher reported levels of career planning. Gould (1979) reports an internal consistency reliability estimate of .80 for his career planning measure. Other researchers which have used Gould's scale report internal consistency reliability estimates of .78 to .82 (Mathieu et al, 1992; Noe & Schmitt, 1986; Noe & Steffy, 1989). The second behavioral measure was seeking developmental activities. Seeking developmental activities was measured with five items written to reflect the behaviors desired as a result of the workshop (e.g., I look for job assignments to assist me in reaching my career goals"; "I actively seek developmental activities which support my career goals"). High scores indicate higher reported levels of seeking developmental activities (see Figure 3.14). For each of these behavioral measures, the items were changed slightly when used for supervisor evaluations of the employee's behavior (e.g., instead of "I actively seek developmental activities which support my career goals", the item read "This employee actively seeks developmental activities which support his/her career goals.") All of the behavior measures were treated independently (e.g., career planning and seeking development activities were treated as independent measures and participant and supervisor ratings were treated as independent measures).

As with the knowledge measures, career development behaviors were measured with self-report of the extent to which the subject believed they engaged in career planning and sought developmental activities. It was

1. I seek out activities to help in my career development.
2. I look for job assignments to assist me in reaching my career goals.
3. I actively seek developmental activities which support my career goals.
4. I spend a lot of time on developmental activities in support of my career goals.
5. I am dedicated to my individual development plan.

Note: Items are rated on a five-point scale (1 = strongly disagree to 5 = strongly agree).

Figure 3.14. Items Measuring Seeking Developmental Activities.

believed that self-report would be appropriate in this instance as frequently these behaviors are not observable to others. However, in an effort to increase confidence in the behavior measures, supervisor reports of the extent to which the subject engaged in these behaviors were also collected. This would allow a comparison of results when using self-report versus supervisor report of behavior. Wexley and Baldwin (1986) used a similar strategy collecting self-report and other-report of the frequency with which participants demonstrated the time management behaviors taught in the training studied.

Demographic Variables

Data was collected from subjects on a variety of demographic variables, including age, sex, race, job tenure, and organization tenure.

Data Analysis

The psychometric properties of the measures were evaluated by calculating estimates of internal consistency (coefficient alpha) and conducting a factor analysis. Summary statistics were calculated to describe the characteristics of the sample in terms of gender, race, age, job tenure, and tenure with the organization. Descriptive statistics (means and standard deviations) for each measure and correlations among the variables are also reported. Adjusted knowledge scores and adjusted behavior scores were calculated by regressing the post-test measure (for the knowledge scores) or the

follow-up measure (for the behavior scores) onto the pre-test measure and saving the residual as an adjusted score to be used in the analyses. As explained in the endnotes of Faerman and Ban (1993), adjusted or residualized scores are used in an attempt to avoid some of the problems with traditional gain scores (such as unreliability; Cronbach & Furby, 1970) by decreasing the negative correlation between estimates of gain and pre-test scores (p. 312).

The first research question, related to the effectiveness of the workshop, will be examined by reviewing the mean score on the reaction measure and by conducting t-tests to determine if participants reported more career development knowledge and career development behaviors after the workshop. Correlations among reactions, adjusted knowledge measures, and adjusted behavior measures will be reviewed to answer the second research question which pertained to the relationships among the three criteria of workshop effectiveness.

Hypotheses were tested through the use of correlation analysis and hierarchical regression analysis. Correlation analysis was used to test hypothesis 1a and 2a regarding the relationship between the individual difference variables and participants' reactions to the workshop and hypothesis 4a regarding the relationship between locus of control and the behavior measures. Mediated relationships were tested by examining the correlation matrix and using hierarchical multiple regression. Hierarchical regression was also used to test the hypothesized moderated relationships. Each hypothesis

was initially tested independently (i.e., the correlation between job involvement and reactions and the correlation between job insecurity and reactions were considered separately.) In any situations where multiple hypotheses related to one criteria are supported, further analyses will be conducted to determine the relative importance of each variable (i.e., the importance of the variable when other significant relationships are also included in the analysis.)

The first step in testing hypotheses 1b, 2b, and 3a, which investigate the relationship of the individual difference variables to the knowledge measures, was to review the correlation matrix for initial evidence of a mediated relationship. It was expected that there would be a significant positive correlation between the individual difference variable and the mediator (motivation to learn) and between the mediator and the adjusted knowledge measure. Next, separate regression equations were created for each of the two knowledge measures (career insight and knowledge of individual development planning), using the adjusted score as the criterion. The individual difference variable was entered into the equation in the first step, and the proposed mediator (i.e., motivation to learn) was entered into the equation in the second step. It was expected that, without the mediator in the equation, the individual difference variable would account for a significant amount of variance in the adjusted knowledge measure. However, when motivation to learn was entered into the equation, it was expected that it would account for a significant amount of variance in the adjusted knowledge measure and the strength of the

relationship between the individual difference variables and the adjusted knowledge measure would decrease.

A similar method was used to test hypotheses 1c, 2c, and 3b, which examined the relationship between the individual difference variables and the adjusted behavior measures (career planning and seeking developmental activities). Again, the correlation matrix was reviewed expecting to find a significant relationship between the individual difference variable and the mediator and between the mediator and the adjusted behavior measure. A regression analysis was then conducted entering the individual difference variable into the equation first followed by the proposed mediator (i.e., motivation to transfer). It was expected that the individual difference variables would account for a significant amount of variance in the adjusted behavior measure without the mediator in the equation. When motivation to transfer was entered into the equation, it was expected that it would account for a significant amount of variance in the adjusted behavior measure and the relationship between the individual difference variable and the adjusted behavior measure would decrease.

Hierarchical multiple regression was also used to test hypothesis 4b which proposed that self-efficacy for engaging in career development would be a moderator between locus of control and the career development behaviors. Separate regression equations were created for each of the behavior measures with the adjusted behavior measure serving as the criterion. Locus of control

and the proposed moderator (self-efficacy for career development) were both entered into the equation on the first step. The next step was to add the interaction term (locus of control multiplied by self-efficacy). A moderated relationship would be indicated by the significance of the interaction term.

CHAPTER IV

RESULTS

This chapter presents the results of the study in four main sections, evaluation of measures, tests of research questions and hypotheses, supplemental analyses, and a summary of results. The section on evaluation of measures presents data on the psychometric properties of the measures used in the study, specifically the internal reliability and factor structure of the measures.

The second section, tests of research questions and hypotheses, presents descriptive statistics, t-tests, correlation analyses and hierarchical regression analyses performed to examine the research questions and test the hypotheses.

Additional analyses that were performed beyond those necessary to test the hypotheses are presented in the section on supplemental analyses. Finally, the last section reviews and summarizes the findings of the study.

Evaluation of Measures

The measures used in the study were evaluated based on their internal reliability and factor structure. The internal reliability of the measures will be reviewed first, followed by a review of the factor structure.

Internal Reliability

In the initial analysis of the internal consistency reliability, the estimates ranged from .57 to .94. Investigation of the item-total correlations indicated that removal of one item from the career insight measure (item 4) and two items from the locus of control measure (item 7 and item 9) would improve the reliability estimates for these measures. After removal of these items, the reliability estimate for the pre-test measure of career insight increased from .80 to .83 and for the post-test measure increased from .77 to .78. In addition, the reliability estimate for locus of control increased from .56 to .60. The final estimates of internal consistency along with means, standard deviations, and intercorrelations for all measures are presented in Table 4.5 found later in this chapter. As can be seen from this table, all measures, with the exception of locus of control, had internal consistency reliability estimates of .73 or higher, suggesting that they have sufficient internal reliability for research purposes (cf., Nunnally, 1978). Because the internal consistency reliability estimate for locus of control is low (.60), further analyses involving this measure should be viewed with caution.

Factor Structure

Factor analysis was conducted to examine the factor structure of the variables. The factor analysis was performed with the above-mentioned items removed from the analysis. The results of the factor analysis aided in

determining whether the items group together as expected and whether the measures are sufficiently different. Four separate factor analyses of qualitatively different measures were conducted in an effort to maintain a good ratio between the number of items and the number of subjects (minimum of 1 to 5 ratio considered acceptable; Tabachnick & Fidell, 1989). For each set of items, principal components factor analysis, along with orthogonal factor rotations and scree tests, were used to interpret the data.

The first factor analysis was conducted with the items representing the individual difference variables measured on the pre-test, specifically perceived supervisor support for career development, perceived job insecurity, job involvement, locus of control, and motivation to learn. Next, the items designed as pre-test measures of knowledge and behavior (knowledge of individual development planning, career insight, career planning, seeking developmental activities) were subjected to a factor analysis. The third factor analysis was conducted using the items comprising the post-test or follow-up measures of these same knowledge and behavior variables. Finally, a fourth factor analysis was conducted with the items representing the other post-test measures (reactions to the workshop, motivation to transfer, and self-efficacy for engaging in career development behaviors).

The rotated factor loadings for the first set of items are presented in Table 4.1. The analysis resulted in a five factor solution which accounted for 57.6% of the variance. In general, items included in this first group loaded in a fashion

Table 4.1

Factor Analysis of Individual Difference Variables

		Rotated Factor Loadings				
	Items	1	2	3	4	5
SUP5	My supervisor is interested in my career planning efforts.	.91				
SUP6	My supervisor is willing to spend time helping with my career planning.	.90				
SUP2	My supervisor is supportive of my efforts to acquire new knowledge.	.89				
SUP3	My supervisor encourages me to learn new things.	.88				
SUP4	My supervisor supports me in my individual development planning.	.87				
SUP7	My supervisor encourages me to set career goals.	.84				
SUP1	My supervisor spends time helping me with career planning.	.77				
INSEC5	I believe I may lose my current position in the near future.		.91			
INSEC4	I believe my current position may be in jeopardy.		.89			
INSEC6	It is probable that my current position may not last long.		.85			
INSEC3	I worry about losing my job.		.80			
INSEC1	I am afraid of losing my job.		.79			
INSEC2	I'm not sure how long my job will last.		.73			
MTL4	I will strive to learn all I can about career management.			.84		
MTL3	It is very important to me that I learn a lot from this workshop.			.83		
MTL2	I am motivated to learn everything I can about career management.			.80		
MTL1	I am willing to exert considerable effort in learning this material.			.79		
JOBINV1	The major satisfaction in my life comes from my job.				.75	
JOBINV5	I live, eat, and breathe my job.				.74	
JOBINV2	The most important things that happen to me involve my job.				.69	
JOBINV6	Sometimes I lie awake at night thinking ahead to the next day's work.				.63	
JOBINV3	I am very much involved personally in my work.				.62	
JOBINV7	I'll stay overtime to finish a job, even if I'm not paid for it.				.60	
JOBINV4	There is purpose to my life, and my work is a meaningful part of that purpose.				.58	
LOCUS3	I prefer games involving some luck over games requiring pure skill.					.62
LOCUS2	When I make plans I am almost always certain to make them work.					.52
LOCUS8	Often people get ahead just by being lucky.					.50
LOCUS6	I usually don't set goals because I have a hard time following through on them.					.46
LOCUS10	It's pointless to keep working on something that's too difficult for me.					.43
LOCUS1	When I get what I want it's usually because I worked hard for it.					.40
LOCUS5	My major accomplishments are almost always entirely due to my hard work and ability.			.43		.39
LOCUS4	I can learn almost anything if I set my mind to it.					.38
Eigenvalue:		6.01	4.10	3.93	2.79	1.59
Percent of Total Variance:		18.8	12.8	12.3	8.7	5.0

Note: In general, factor loadings less than .40 have been omitted.

consistent with the constructs they were intended to measure, suggesting that perceived supervisor support for career development, perceived job insecurity, motivation to learn, job involvement and locus of control are relatively different measures. Therefore, no changes were made to the measures based on the factor analytic results.

Table 4.2 and Table 4.3 present the factor analytic results for the pre-test and post-test/follow-up measures of knowledge and behavior. Because the same items are included in both analyses (only the point in time at which the data was collected differs - before versus after the workshop), these two factor analyses will be discussed together. Both factor analyses resulted in a four factor solution, accounting for 67.1% of the variance in the pre-test measures and 74.7% of the variance in the post-test/follow-up measures. Examination of the factor analysis indicates that some items are not loading as expected. However, only items which appear to be loading on multiple factors or on an inappropriate factor on both the pre-test and the post-test/follow-up will be removed from analyses. The rotated factor loadings indicate that item 4 of knowledge of individual development planning loads on three factors in the pre-test (PRE-IDP4) and also loads on two factors in the post-test/follow-up (POST-IDP4). Thus, this item was removed from further analyses. Although some of the career planning items load on both the career planning factor and the seeking developmental activities factor on the post-test/follow-up, they are two different factors in the pre-test, thus no item deletions were made. Finally,

Table 4.2

Factor Analysis of Pre-test Measures of Knowledge and Behavior

	Item	Rotated Factor Loadings			
		1	2	3	4
PRE-CP4	I have a specific plan for my career.	.79			
PRE-CP6	My career objectives are very clear to me.	.76			
PRE-CP3	I have decided what my career objectives are.	.74			
PRE-CP5	I know exactly what I need to do to reach my career goals.	.70			.41
PRE-CP1	I have spent a lot of time planning my career.	.69			
PRE-CP2	I have spent a lot of time considering my career goals.	.57	.41		
PRE-DA3	I actively seek developmental activities which support my career goals.		.85		
PRE-DA2	I look for job assignments to assist me in reaching my career goals.		.81		
PRE-DA1	I seek out activities to help in my career development.		.77		
PRE-DA4	I spend a lot of time on developmental activities in support of my career goals.		.68		
PRE-DA5	I am dedicated to my individual development plan.		.43		.53
PRE-INS3	I know exactly what my interests are.			.83	
PRE-INS2	I have a good feel for my career interests.			.83	
PRE-INS1	I know specifically what my skills, values, and interests are.			.80	
PRE-IDP1	I understand the individual development planning process.				.83
PRE-IDP2	I feel prepared to write my individual development plan.				.68
PRE-IDP3	I know how to take action on my career goals.	.53			.56
PRE-IDP4	I know how to identify my career goals/interests.	.53		.41	.39
Eigenvalue:		7.49	1.92	1.46	1.20
Percent of Total Variance:		41.6	10.7	8.1	6.7

Note: In general, factor loadings less than .40 have been omitted.

Table 4.3

Factor Analysis of Post-test or Follow-up Measures of Knowledge and Behavior

	Item	Rotated Factor Loadings			
		1	2	3	4
POST-DA1	I seek out activities to help in my career development.	.86			
POST-DA3	I actively seek developmental activities which support my career goals.	.85			
POST-DA2	I look for job assignments to assist me in reaching my career goals.	.85			
POST-DA4	I spend a lot of time on developmental activities in support of my career goals.	.75			
POST-DA5	I am dedicated to my individual development plan.	.73			
POST-CP2	I have spent a lot of time considering my career goals.	.67	.40		
POST-CP6	My career objectives are very clear to me.	.65	.65		
POST-CP1	I have spent a lot of time planning my career.	.59	.43	.54	
POST-CP4	I have a specific plan for my career.	.43	.82		
POST-CP3	I have decided what my career objectives are.	.45	.73		
POST-CP5	I know exactly what I need to do to reach my career goals.	.46	.68		
POST-INS1	I know specifically what my skills, values, and interests are.			.84	
POST-INS3	I know exactly what my interests are.			.78	
POST-INS2	I have a good feel for my career interests.			.69	
POST-IDP1	I understand the individual development planning process.				.82
POST-IDP2	I feel prepared to write my individual development plan.				.62
POST-IDP3	I know how to take action on my career goals.		.49		.57
POST-IDP4	I know how to identify my career goals/interests.			.41	.55
Eigenvalue:		8.29	2.9	1.24	1.02
Percent of Total Variance:		46.0	16.1	6.9	5.7

Note: Factor loadings less than .40 have been omitted.

knowledge of individual development planning item 3 (PRE-IDP3, POST-IDP3) did load on two factors; however, it was included in further analyses in order to maintain at least three items in the measure.

The last set of items submitted to a factor analysis consisted of items on the post-test not related to the knowledge or behavior measures, specifically items intended to measure reactions to the workshop, motivation to transfer, and self-efficacy for engaging in career development behaviors. The rotated factor matrix, presented in Table 4.4, indicates a three factor solution accounting for 71.7% of the variance. One item intended to measure motivation to transfer (MTT4) did load on a second factor but not to a sufficient extent to warrant elimination of that item. Therefore, this factor analysis indicates that the items intended to measure reaction to the workshop, motivation to transfer and self-efficacy for engaging in career development behaviors were sufficiently different.

Tests of Research Questions and Hypotheses

Following is a review of the descriptive statistics and analyses conducted in order to determine whether the hypotheses were supported by the data. Hypotheses 1a, 2a, and 4a were examined using correlation analyses. The remaining hypotheses, which involved mediated and moderated relationships, were examined using hierarchical multiple regression.

Table 4.4

Factor Analysis of Post-test Measures Other than Knowledge and Behavior

	Item	Rotated Factor Loadings		
		1	2	3
REAC2	Overall, my reaction to this workshop was very positive.	.86		
REAC3	This workshop was a good use of my time.	.84		
REAC4	I would recommend this workshop to others.	.83		
REAC1	I enjoyed the content of this workshop.	.76		
MTT2	I will apply what I learned in this workshop when writing career goals and plans.		.83	
MTT1	I plan to use what I learned in order to do my individual development planning.		.79	
MTT3	My purpose for participating in this workshop was to learn material that I can use in my career planning.		.74	
MTT4	I am motivated to use the workshop information for my career planning.	.47	.64	
EFF4	I am confident in my ability to plan my career.			.84
EFF3	I consider myself to be skilled in development planning.			.77
EFF1	I am confident in my ability to do individual development planning.			.76
EFF2	I expect to be successful in my career planning process.			.66
Eigenvalue:		5.97	1.61	1.03
Percent of Total Variance:		49.7	13.4	8.6

Note: Factor loadings less than .40 have been omitted.

Descriptive Statistics

The means, standard deviations, internal consistency reliability estimates and intercorrelations of study variables and demographic variables (age, sex, job tenure, and organization tenure) are presented in Table 4.5. Means of the study variables ranged from 2.81 to 4.31, with motivation to learn, motivation to transfer, reactions and the post-test measures of knowledge having means greater than or equal to 4.0. The standard deviations of study variables ranged from .39 to .94.

Examination of Research Questions

The first research question involved determining the effectiveness of the workshop in terms of reactions, knowledge, and behaviors. The mean score on the reaction measure of 4.20 (SD = .58) suggests that participants did have positive reactions to the workshop. T-tests were then conducted to determine if participants had more career development knowledge or engaged in more career development behaviors after the workshop. Two knowledge measures were used, career insight and knowledge of individual development planning. T-tests comparing the pre-test score of each knowledge measure with the corresponding post-test score of the knowledge measure are presented in Table 4.6. For the analysis comparing pre-tests and post-tests of career insight, the t-value was -8.59 (df=246) with a one-tailed probability of less than .001. The t-value for the analysis comparing the pre-test and post-test of knowledge of

Table 4.5

Means, Standard Deviations, Alphas and Intercorrelations Among Study Variables.

#	Variable	N	Mean	(SD)	1	2	3	4	5	6	7	8	9	10	11	12
1.	ADJ-INS	247	3.68	(.69)	--											
2.	ADJ-IDP	247	2.81	(.62)	.47***	--										
3.	ADJ-CP	36	2.87	(.68)	.20	.54**	--									
4.	ADJ-DA	36	3.36	(.64)	.10	.37*	.80***	--								
5.	MTL	252	4.05	(.58)	.19**	.18**	.16	.11	(.86)							
6.	INSEC	244	3.16	(.94)	.04	.06	.22	.11	.04	(.91)						
7.	SUP	246	3.30	(.88)	.02	.05	-.06	-.08	-.02	-.21***	(.95)					
8.	JOBINV	251	3.00	(.70)	.15*	.19**	.18	.19	.11	.04	.15*	(.80)				
9.	LOCUS	163	3.71	(.39)	.11	.17*	.15	.12	.34***	-.09	-.02	.15*	(.60)			
10.	MTT	246	4.31	(.48)	.38**	.50**	.29	.27	.40***	.13*	.02	.16*	.21**	(.86)		
11.	EFF	247	3.78	(.54)	.46**	.67**	.48**	.37*	.31***	.01	.11	.21**	.31***	.51***	(.81)	
12.	REAC	247	4.20	(.58)	.30**	.37**	.25	.11	.28***	.21***	-.03	.04	.08	.66***	.44***	(.91)
	Age	232	42.59	(8.5)	-.07	-.10	-.23	-.23	-.15*	.08	-.18**	.02	-.08	-.12	-.09	-.03
	Sex	249	1.49	(.5)	.16*	.11	.14	.03	.29***	.01	.03	-.04	.01	.15*	.17**	.12
	Job Tenure	227	7.07	(6.84)	-.10	-.13	-.19	-.27	-.07	-.06	-.07	-.22**	-.30***	-.07	-.20**	-.02
	Org. Tenure	243	14.38	(7.06)	-.13*	-.05	-.03	-.04	-.19**	.03	-.06	-.02	-.15	-.08	.10	-.06

Note:

* indicates 2-tailed significance at the $p < .05$ level; ** $p < .01$ level; *** $p < .001$ level; alphas occupy the diagonal; scale anchors (1=strongly disagree; 2=disagree; 3=neutral/undecided; 4=agree; 5=strongly agree); sex (1=male; 2=female); ADJ-INS refers to the adjusted score for career insight (the residual from regressing the post-test on the pre-test); ADJ-IDP refers to the adjusted score for knowledge of individual developmental planning; ADJ-CP refers to the adjusted score for career planning; ADJ-DA refers to the adjusted score for seeking developmental activities; MTL refers to motivation to learn; INSEC refers to perceived job insecurity; SUP refers to perceived supervisor support for career development; JOBINV refers to job involvement; LOCUS refers to locus of control; MTT refers to motivation to transfer; EFF refers to self-efficacy for engaging in career development; REAC refers to reactions.

Table 4.6

T-tests for Knowledge and Behavior Measures

Variable	Mean		t value
	Pre-test	Post-test	
<u>Knowledge</u>			
Career Insight	3.69	4.04	-8.59***
Knowledge of Individual Development Planning	2.82	4.00	-25.94***
<u>Behaviors</u>			
Career Planning	2.69	3.41	-5.53***
Seeking Developmental Activities	3.28	3.52	-1.61

Note: *** indicates one-tailed significance at the $p < .001$ level; the sample size for career insight and knowledge of individual development planning is 247; the sample size for career planning and seeking developmental activities is 36.

individual development planning was -25.94 ($df=246$) which has a one-tailed probability of less than $.001$. Therefore, it can be concluded that participants did report more career development knowledge after attending the workshop.

T-tests were also used to investigate whether participants reported more career development behaviors after attending the workshop. Two behavior measures were used, career planning and the extent to which the individual sought developmental activities. The t-value for the comparison of pre-test and post-test values of career planning was -5.53 ($df=35$) which has a one-tailed probability of less than $.001$. The t-value for the comparison of the pre-test and post-test values of seeking developmental activities was -1.61 ($df=35$) which has a one-tailed probability of $.058$. Thus, although the sample size for this analysis was low ($n=36$), it does appear that participants reported increased career development behaviors following the workshop.

In summary, the results of this data indicate that the workshop is effective in terms of reactions, knowledge, and behaviors. The high mean on the reaction measure suggests that participants did have positive reactions to the workshop. Significant t-values also suggest that reported levels of both career insight and knowledge of individual development planning increased after the workshop. Finally, significant t-values suggest an increase in career planning after the workshop. The t-value for seeking developmental activities was not significant ($p=.058$). Overall, then, the data suggests that the workshop is perceived to be

effective in that participants had positive reactions, reported more knowledge, and reported more career planning after participating in the workshop.

The second research question required an examination of the intercorrelations among the criteria. The first step was to determine the correlations between reactions to the workshop and adjusted measures of the knowledge variables. Reactions were significantly positively correlated with measures of both knowledge variables, adjusted career insight ($r=.30$; one-tailed $p<.001$) and adjusted knowledge of individual development planning ($r=.37$; one-tailed $p<.001$). The correlations between reactions and the adjusted measures of behaviors were not significant ($r=.25$, one-tailed $p=.08$ for adjusted career planning and $r=.11$, one-tailed $p=.27$ for adjusted seeking developmental activities.) Next, the relationships between each of the adjusted knowledge measures and each of the adjusted behavior measures were examined. Adjusted career insight was not significantly correlated with either behavior measure ($r=.21$, one-tailed $p=.12$ for adjusted career planning and $r=.10$, one-tailed $p=.29$ for adjusted seeking developmental activities). Adjusted knowledge of individual development planning was significantly positively correlated with both behavior measures, adjusted career planning ($r=.54$; one-tailed $p<.01$) and adjusted seeking developmental activities ($r=.37$; one-tailed $p<.05$). Thus, the data suggests that reactions were related to knowledge but not behavior and that one of the two knowledge measures was related to both behaviors. These

relationships are depicted in Figure 4.1, with solid lines representing significant correlations and dashed lines representing nonsignificant correlations.

These results demonstrating intercorrelations among the criteria provide evidence for previously held beliefs regarding the relationships between reactions, learning, and behavior. This is in contrast to Alliger and Janak's (1989) proposal that perhaps reactions are independent of the other criteria. In this data, reactions are significantly correlated with knowledge measures. The relationship between knowledge and behavior in this study is similar to that found by Alliger and Janak. The results from this study, though providing no information on the causal relationships among the criteria, do suggest a relationship between reactions and knowledge and between knowledge and behavior. In other words, participants with more positive reactions to the workshop also reported higher levels of career insight and knowledge of individual development planning but did not report higher levels of career planning or seeking developmental activities. Furthermore, individuals who reported higher levels of knowledge of individual development planning also reported higher levels of career planning and seeking developmental activities. These relationships will be further discussed in Chapter V.

Tests of Hypotheses

Correlational Analyses. Hypotheses 1a and 2a proposed relationships between individual difference variables and participants' reactions to the career

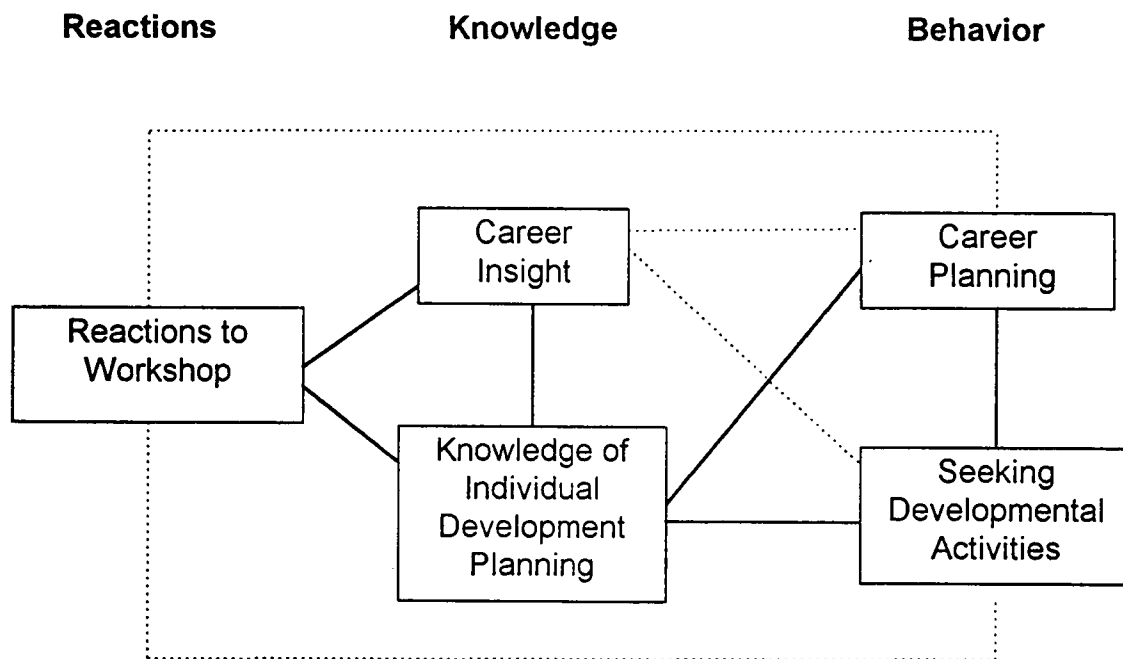


Figure 4.1. Relationships Among Workshop Criteria (Note: Significant correlations are represented by solid lines.)

development workshop. Hypothesis 1a stated that job involvement would be significantly positively related to reactions. As can be seen in Table 4.5, the Pearson r for the relationship between job involvement and reactions was not significant ($r = .04$; one-tailed $p = .29$), indicating that hypothesis 1a was not supported.

Hypothesis 2a stated that perceived job insecurity would be positively related to reactions to the workshop. The Pearson r for this relationship was .21 (one-tailed $p < .001$) suggesting that hypothesis 2a was supported. In other words, the results suggest that individuals with higher perceived job insecurity also reported more positive reactions to the career development workshop.

Taken together, these results indicate mixed support for the hypotheses related to correlations between individual difference variables and reactions to the workshop. The hypothesis suggesting a relationship between job involvement and reactions, hypothesis 1a, was not supported. In contrast, hypothesis 2a was supported by a significantly positive relationship between perceived job insecurity and reactions to the workshop.

The final hypothesis that involves correlational analyses pertained to participant's engagement in career development behaviors rather than reactions to the workshop. Hypothesis 4a stated that locus of control would be positively related to engagement in career development behaviors. This hypothesis was tested by examining the Pearson r for the relationship between locus of control (LOCUS) and the adjusted measure of career planning (ADJ-CP) and the

relationship between locus of control (LOCUS) and the adjusted measure of seeking developmental activities (ADJ-DA). The Pearson r for the relationship between locus of control and adjusted career planning was .15 (one-tailed $p=.23$) and the Pearson r for the relationship between locus of control and adjusted seeking developmental activities was .12 (one-tailed $p=.28$). Thus hypothesis 4a proposing a relationship between locus of control and engaging in career development behaviors was not supported by this data.

Mediated Relationships. There were two sets of hypotheses that proposed mediated relationships. First, hypotheses 1b, 2b, and 3a stated that motivation to learn would mediate the relationships between individual difference variables (job involvement, perceived job insecurity, and perceived supervisor support for career development) and career development knowledge after the workshop. The second set of hypotheses (1c, 2c, and 3b) proposed that motivation to transfer would mediate the relationships between the individual difference variables (job involvement, perceived job insecurity, and perceived supervisor support for career development) and engaging in career development behaviors. Each of these hypotheses was tested by examining the correlations among the variables and conducting hierarchical multiple regression.

All tests of mediators followed the same steps. The first step was to determine whether there was a significant relationship between the individual difference variable and the proposed mediator and between the mediator and the criterion. The lack of significance in either of these correlations would

indicate the absence of a mediated relationship. If significant relationships were found between the individual difference variable and the proposed mediator and between the proposed mediator and the criterion variable, hierarchical multiple regression was conducted to determine if a mediated relationship existed. The individual difference variable was entered into the equation first. Then the proposed mediator was entered into the equation expecting the inclusion of the mediator to decrease the size of the beta coefficient for the individual difference variable.

The first analysis examined *motivation to learn as a mediator between job involvement and career development knowledge* after the workshop (hypothesis 1b). As described above, the first step to examine this hypothesis was to determine whether job involvement was significantly related to motivation to learn and whether motivation to learn was significantly related to the adjusted knowledge measures. Examination of the correlation matrix indicates that job involvement was significantly related to motivation to learn ($r = .11$; one-tailed $p < .05$) and motivation to learn was significantly related to both knowledge measures ($r = .19$, one-tailed $p < .01$ for adjusted career insight and $r = .18$, one-tailed $p < .01$ for adjusted knowledge of individual development planning.) These significant relationships provide initial evidence of a potential mediated relationship

The next step was to conduct a hierarchical multiple regression analysis for each knowledge measure, adjusted career insight (ADJ-INS) and adjusted

knowledge of individual development planning (ADJ-IDP), as shown in Table 4.7. For both adjusted career insight and adjusted knowledge of individual development planning, job involvement was entered into the regression equation first resulting in a significant beta and a significant change in R^2 . The next step was to enter the proposed mediator, motivation to learn, into the equation. This step resulted in significant betas (one-tailed) for both variables and a significant change in R^2 (one-tailed), but only a very slight decrease in the beta for job involvement. These results do not support hypothesis 1b that motivation to learn mediates a relationship between job involvement and knowledge for either of the adjusted knowledge measures.

The same process was followed to test whether *motivation to learn mediated the relationship between perceived job insecurity and the knowledge measures* (hypothesis 2b). It was established above that motivation to learn is significantly positively correlated with the adjusted measures of both knowledge variables. However, examination of the correlation matrix in Table 4.5 reveals that perceived job insecurity was not significantly related to motivation to learn ($r=.04$; one-tailed $p=.25$) indicating that motivation to learn was not acting as a mediator. Table 4.7 presents the results for the hierarchical multiple regressions related to this hypothesis, providing further evidence that hypothesis 2b is not supported by the data. Specifically, the failure of job insecurity to result in a significant R^2 indicates that job insecurity is not a predictor of career development knowledge after the workshop.

Table 4.7

Tests of Motivation to Learn as a Mediator

Step/Predictor	Criterion Variable					
	Adjusted Career Insight			Adjusted Knowledge of Individual Development Planning		
	β	R^2	ΔR^2	β	R^2	ΔR^2
1 Job Involvement	.16**	.02	.02**	.19**	.04	.04**
2 Job Involvement	.14*	.05	.03**	.17**	.06	.02*
Motivation to Learn	.17**			.15*		
1 Job insecurity	.02	.00	.00	.04	.002	.002
2 Job Insecurity	.01	.03	.03**	.03	.03	.03**
Motivation to Learn	.18**			.16**		
1 Supervisor Support	.02	.00	.00	.05	.002	.002
2 Supervisor Support	.03	.03	.03**	.05	.03	.03**
Motivation to Learn	.19**			.17**		

Note: n=233; * indicates one-tailed significance at the $p < .05$; ** $p < .01$ level; *** $p < .001$ level.

Similar results were found when testing hypothesis 3a which proposed that *motivation to learn mediated the relationship between perceived supervisor support for career development and the knowledge measures*. Again, motivation to learn is significantly related to the knowledge measures. However, the correlation matrix revealed that perceived supervisor support was not significantly related to motivation to learn ($r=-.02$; one-tailed $p=.38$). The regression equations, shown in Table 4.7, further confirmed that motivation to learn did not mediate the relationship between perceived supervisor support and knowledge as R^2 for supervisor support predicting the adjusted knowledge measures was not significant. Thus, hypothesis 3a was not supported.

The next set of hypotheses involving hierarchical multiple regression (1c, 2c, and 3b) proposed that *motivation to transfer mediated the relationship between the individual difference variables and engaging in career development behaviors after the workshop*. The first step in testing hypothesis 1c, which proposed that *motivation to transfer mediated the relationship between job involvement and the career development behaviors*, was to determine whether there was a significant correlation between job involvement and motivation to transfer and between motivation to transfer and the career development behaviors. The correlation between job involvement and motivation to transfer was .16 which had a one-tailed significance of $p<.01$. However, motivation to transfer was not significantly correlated with either adjusted career planning ($r=.29$; one-tailed $p=.052$) or adjusted seeking development activities ($r=.27$;

one-tailed $p=.07$). The hierarchical multiple regression analysis depicted in Table 4.8 provides further evidence that motivation to transfer did not act as a mediator. For adjusted measures of both career planning and seeking developmental activities, job involvement did not have a significant R^2 in predicting the career development behaviors. Therefore, there is not support for hypothesis 1c.

Hypothesis 2c, proposing that motivation to transfer mediated the relationship between *perceived job insecurity* and engaging in career development behaviors, was tested next following the same strategy as outlined above. The correlation between perceived job insecurity and motivation to transfer was .13 which had a one-tailed significance of $p=.02$. However, the lack of a significant relationship between motivation to transfer and the adjusted measures of the behaviors (discussed above) and the lack of a significant R^2 in the regression equations shown in Table 4.8 do not support the proposed mediated relationship for either of the career development behaviors tested. Thus, hypothesis 2c was not supported.

Next, analyses were performed to determine whether motivation to transfer mediated the relationship between *perceived supervisor support* for career development and engaging in career development behaviors, as proposed in hypothesis 3b. Neither of the necessary correlations was significant. The correlation between supervisor support and motivation to transfer was not significant ($r = .02$; one-tailed $p = .38$) and the correlations

Table 4.8

Tests of Motivation to Transfer as a Mediator

Step/Predictor	Criterion Variable					
	Adjusted Career Planning			Adjusted Seeking Developmental Activities		
	β	R^2	ΔR^2	β	R^2	ΔR^2
1 Job Involvement	.19	.03	.03	.21	.05	.05
2 Job Involvement	.16	.10	.07	.19	.10	.06
Motivation to Transfer	.26			.24		
1 Job Insecurity	.26	.07	.07	.20	.04	.04
2 Job Insecurity	.24	.13	.06	.18	.10	.06
Motivation to Transfer	.25			.24		
1 Supervisor Support	-.04	.001	.001	-.13	.02	.02
2 Supervisor Support	-.05	.08	.08	-.14	.09	.07
Motivation to Transfer	.28			.27		

Note: n=29; * indicates one-tailed significance at the $p < .05$; ** $p < .01$ level; *** $p < .001$ level.

between motivation to transfer and the adjusted measures of the behaviors were not significant. Thus, a mediated relationship was not possible. The results of the regression analysis, shown in Table 4.8, provide further evidence that hypothesis 3b was not supported.

It should be noted that all of the above analyses performed with the behavior measures used a small sample size ($n=29$). Thus, the above results should be interpreted with caution as there probably was insufficient power to detect potential relationships among the variables.

To summarize the above analyses, motivation to learn and motivation to transfer were hypothesized to be mediators of the relationships between the individual difference variables (job involvement, perceived job insecurity, and perceived supervisor support for career development) and knowledge and behavior following the workshop, respectively. Support was not found for hypothesis 1b, 2b or 3a which proposed motivation to learn as a mediator between the individual difference variables and the knowledge measures. Hypotheses proposing motivation to transfer as a mediator between the individual difference variables and the behavior measures (hypotheses 1c, 2c, and 3b) were also not supported by the data.

Moderated Relationships. The final hypothesis, hypothesis 4b, proposed self-efficacy as a moderator of the relationship between locus of control and engagement in career development behaviors. Specifically, it was hypothesized that the relationship between locus of control and engaging in the career

development behaviors would be stronger to the extent that subjects had higher self-efficacy for engaging in career development behaviors. Hierarchical multiple regression was used to test this proposed moderated relationship. In the first step of the regression equation, the individual difference variables were entered, specifically locus of control and self-efficacy for engaging in career development behaviors. The interaction term was entered into the equation in the second step of the analysis. A moderated relationship would be indicated by a significant change in R^2 when the interaction term is entered into the equation.

The results of the test of self-efficacy as a moderator of locus of control are presented in Table 4.9. For the analysis with the adjusted measure of career planning, the change in R^2 when adding the interaction term (locus of control X self-efficacy) to the equation was not significant. However, when predicting the adjusted measure of seeking developmental activities, the locus of control X self-efficacy interaction term does have a significant beta and the inclusion of the variable results in a significant change in R^2 . The results suggest that self-efficacy does moderate the relationship between locus of control and seeking developmental activities, providing partial support for hypothesis 4b.

Although the results suggest that self-efficacy does moderate the relationship between locus of control and seeking developmental activities, the moderated relationship is not operating as expected. The hypothesis stated that self-efficacy would moderate a positive relationship between locus of control and seeking developmental activities such that the relationship would be stronger

Table 4.9

Tests of Self-efficacy as a Moderator of Locus of Control

Step/Predictor	Criterion Variable		
	Adjusted Career Planning		
	β	R^2	ΔR^2
1 Locus of Control	-.006	.39*	.39**
Self-efficacy	.63***		
2 Locus of Control	-1.54	.48	.09
Self-efficacy	-1.74		
Locus of Control X Self-efficacy	3.23		
Step/Predictor	Adjusted Seeking Developmental Activities		
	β	R^2	ΔR^2
1 Locus of Control	.04	.17	.17
Self-efficacy	.39		
2 Locus of Control	-2.13*	.34	.17*
Self-efficacy	-2.97*		
Locus of Control X Self-efficacy	4.6*		

Note: n = 21; * indicates one-tailed significance at the $p < .05$ level; ** $p < .01$ level.

under conditions of high self-efficacy. As Figure 4.2 illustrates, the detected moderated relationship is more complex than the one proposed. When self-efficacy is high, there appears to be a positive relationship between locus of control and seeking developmental activities such that those reporting a more internal locus of control also report higher levels of seeking developmental activity. However, when self-efficacy is low, there is a negative relationship between locus of control such that those who report a more internal locus of control report lower levels of seeking developmental activity. Thus, self-efficacy does not simply affect the strength of the relationship between locus of control and seeking developmental activities but actually changes the nature of that relationship.

Supplemental Analysis

Because most of the hypotheses were not supported by the data, additional regression analyses were conducted to determine the major contributing factors in the prediction of the criteria for workshop effectiveness. Five separate regression analyses were conducted, a separate analysis for reactions to the workshop, the adjusted measures of knowledge (career insight and knowledge of individual development planning), and the adjusted measures of behavior (career planning and seeking developmental activities.) In each analysis, all individual difference variables were entered into the equation

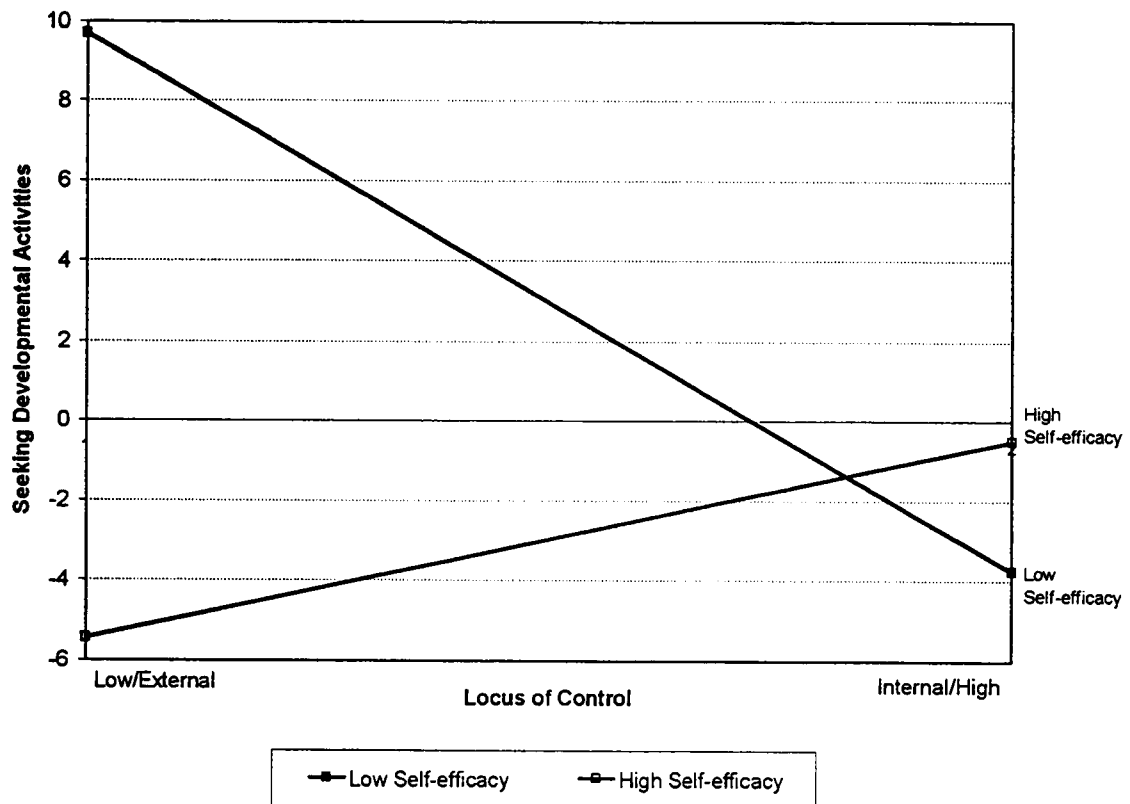


Figure 4.2. The Relationship Between Locus of Control and Seeking Developmental Activities as Moderated by Self-efficacy.

simultaneously to determine which of the variables were most important in predicting the outcomes of the workshop.

The results of each of these analyses is presented in Table 4.10.

Interestingly, self-efficacy has a significant beta weight in the prediction of all five criteria. Self-efficacy predicts unique variance in participants' reactions to the workshop, the adjusted measures of career insight and knowledge of individual development planning, and the adjusted measures of career planning and seeking developmental activities. In addition, job insecurity has a significant positive beta in the equation predicting reactions to the workshop, providing further support for hypothesis 2a stating that job insecurity will be significantly positively related to reactions. Although a relationship between locus of control and reactions was not hypothesized, locus of control does have a significant negative beta in the prediction of participant reactions to the workshop.

Furthermore, motivation to transfer is a significant predictor of both reactions to the workshop and the adjusted measure of knowledge of individual development planning, but not in the prediction of the career development behaviors. In summary, of all the individual difference variables included in this study (job involvement, perceived job insecurity, perceived supervisor support for career development, locus of control, self-efficacy for engaging in career development, motivation to learn, and motivation to transfer), self-efficacy appears to have the most consistent impact, having a significant beta weight in the prediction of reactions, knowledge and behaviors.

Tests of Individual Difference Variables as Predictors of Criteria for Workshop Effectiveness

Note: n=147 for equation with Reactions, 145 for equation with ADJ-INS and ADJ-IDP, and 22 for equations with ADJ-CP and ADJ-DA;
* indicates one-tailed significance at the p<.05 level; ** p<.01 level; *** p<.001 level.

Summary of Findings

This study examined a series of hypotheses regarding the factors related to reactions, knowledge, and behaviors of subjects after participation in a career development workshop. Hypotheses were tested using a combination of correlation analyses and hierarchical regression analysis. Table 4.11 presents a brief summary of each research question and the summary of results related to that research question as well as a list of each hypothesis and an indication of whether the hypothesis was supported by the data.

First, two research questions were examined to increase our understanding of the workshop and the criteria for determining effectiveness of the workshop. As Table 4.11 indicates, the workshop was effective in terms of the three criteria studied. Participants reported positive reactions to the workshop, reported higher levels of career development knowledge (career insight and knowledge of individual development planning) after the workshop, and reported more of at least one of the career development behaviors (career planning but not seeking developmental activities). The second research question addressed the relationship among the three criteria of workshop effectiveness. Results indicated that reactions were related to adjusted knowledge measures but not to adjusted behavior measures. Furthermore, one of the adjusted knowledge measures (knowledge of individual development planning) was related to both of the adjusted behavior measures. These results suggest that the workshop was effective and that there is a relationship among

Table 4.11

Summary of Results

Research Question		Summary of Results
1a	Positive reactions to the workshop?	Yes
1b	Report more career development knowledge after the workshop?	Yes
1c	Report more career development behaviors after the workshop?	Yes for career planning No for developmental activities
2a	Any relationship among reactions, knowledge, and behaviors?	Reactions related to knowledge but not behaviors; one knowledge measure related to behaviors
Hypothesis		Level of Support
1a	$r_{(\text{job involvement, reactions})}$ is positive	Not supported
1b	Job involvement $\rightarrow$ MTL $\rightarrow$ CD knowledge	Not supported
1c	Job involvement $\rightarrow$ MTT $\rightarrow$ CD behaviors	Not supported
2a	$r_{(\text{job insecurity, reactions})}$ is positive	Supported
2b	Job insecurity $\rightarrow$ MTL $\rightarrow$ CD knowledge	Not supported
2c	Job insecurity $\rightarrow$ MTT $\rightarrow$ CD behaviors	Not supported
3a	Supv support $\rightarrow$ MTL $\rightarrow$ CD knowledge	Not supported
3b	Supv support $\rightarrow$ MTT $\rightarrow$ CD behaviors	Not supported
4a	$r_{(\text{locus, CD behaviors})}$ is positive	Not supported
4b	Self-efficacy $\downarrow$ Locus $\longrightarrow$ CD behaviors	Partial support

the criteria for effectiveness.

After examining the above research questions, several hypotheses were tested to determine the factors related to reactions, knowledge, and behaviors following the workshop. The first hypothesis proposed that job involvement was positively related to reactions to the workshop (1a), that motivation to learn mediated a positive relationship between job involvement and career development knowledge (1b), and that motivation to transfer mediated a positive relationship between job involvement and the career development behaviors (1c). None of these hypotheses were supported by the data.

The next hypothesis proposed that there would be a positive relationship between perceived job insecurity and reactions to the workshop (2a), that motivation to learn would mediate a positive relationship between perceived job insecurity and career development knowledge (2b), and that motivation to transfer would mediate a positive relationship between perceived job insecurity and career development behaviors (2c). A significant positive relationship was found between perceived job insecurity and reactions but the hypothesized mediated relationships were not supported.

The third hypothesis proposed that motivation to learn was a mediator between perceived supervisor support for career development and career development knowledge (3a) and that motivation to transfer was a mediator between perceived supervisor support for career development and career development behaviors (3b). Hypothesis 3 was not supported.

Mixed results were found for hypothesis 4. There was not a significant relationship between locus of control and reactions to the workshop (4a). There was partial support for hypothesis 4b suggesting that self-efficacy moderated a relationship between locus of control and the career development behaviors. The interaction term had a significant beta and significant change in R^2 when predicting the adjusted measure of seeking development activities but not when predicting the adjusted measure of career planning. A graph of this relationship showed that there was a positive relationship between locus of control and seeking developmental activities when self-efficacy was high but there was a negative relationship between locus of control and seeking developmental activities when self-efficacy was low.

Because many of the hypothesized relationships were not supported, supplemental analyses were conducted to determine the major factors related to reactions, knowledge, and behaviors after participation in a career development workshop. Results of these analyses suggested that self-efficacy was a significant predictor of each of the five criteria of workshop effectiveness (reactions and adjusted measures of career insight, knowledge of individual development planning, career planning, and seeking developmental activities.) In addition, job insecurity and locus of control had significant betas in the prediction of reactions, and motivation to transfer had a significant beta in the prediction of reactions and adjusted knowledge of individual development planning.

In summary, results of this study did not support most of the hypotheses presented. Implications and possible explanations of these results are presented in Chapter V.

CHAPTER V

DISCUSSION

This study investigated the factors related to employees' reactions, career development knowledge, and career development behaviors after participating in a career workshop. The study relied on literature in the area of career development and training evaluation to identify individual difference variables that were thought to be related to either career development outcomes (e.g., career insight, career planning) or traditional measures of training effectiveness (e.g., learning, behavior change). Previous literature in the areas of career development and training evaluation were also relied on to determine the appropriate criteria for determining the effectiveness of a career program, specifically a career development workshop. Based on this information, a framework was suggested from which specific hypotheses were proposed regarding the factors that are related to the identified criteria for workshop effectiveness.

This study was critical to the literature in that it is one of the first to apply systematic research methodologies to the study of a career program. Results of the study extend the literature by providing information about the effectiveness and benefits of a career program. In addition, this study goes beyond looking at the effectiveness of a career development workshop and identifies individual difference variables thought to be related to reactions, knowledge, and

behaviors after participating in the workshop. The study used existing literature to pose a model of career development workshop effectiveness which can be offered as a framework for further study of career programs.

The framework for the study posed specific relationships between individual difference variables and the criteria for workshop effectiveness. In summary, job involvement and perceived job insecurity were expected to be related to participants' reactions to the career development workshop. Job involvement, perceived job insecurity, and perceived supervisor support for career development were expected to be related to career development knowledge after participating in the workshop, with motivation to learn mediating the relationships. Job involvement, perceived job insecurity, and perceived supervisor support were expected to be related to career development behaviors after participating in the workshop, with motivation to transfer mediating the relationships. Finally, locus of control was expected to be related to career development behaviors after participating in the workshop and self-efficacy was expected to be a moderator between locus of control and career development behaviors. Before examining the hypotheses, two research questions were investigated related to the effectiveness of the workshop and the relationships among the criteria for workshop effectiveness. Results of analyses related to the research questions and hypotheses are discussed below.

Results of Research Questions

Effectiveness of the Workshop

The first research question related to the effectiveness of the workshop. Results indicated that the career development workshop was effective in that participants reported positive reactions to the workshop and reported more career development knowledge (i.e., career insight, knowledge of individual development planning) following the workshop. In addition, subjects reported more career planning after participating in the workshop but not higher levels of seeking developmental activities. These results indicating that this career development workshop was successful in achieving its objectives is an important contribution to the career development field. This is one of the first attempts at determining the effectiveness of a career development workshop and gives practitioners evidence that such a workshop can be valuable in educating employees about career development and in changing their career development behaviors. In addition to examining the effectiveness of the workshop, the intercorrelations among the criteria for workshop effectiveness were also investigated.

Relationships Among Criteria

Although the primary focus of the study was to examine the factors related to the effectiveness of a career development workshop, determining the

relationships among the criteria of reactions, knowledge, and behavior was also an important research question. Results from this study suggest that reactions to the workshop were significantly related to both measures of knowledge after the workshop, and that one of the knowledge measures (knowledge of individual development planning) was significantly related to both of the behavior measures (career planning and seeking developmental activities). Although the correlations between career insight and the behavior measures were not significant, they were positive and fairly high ($r=.21$ for career planning and $r=.10$ for seeking developmental activities), and previous research does suggest a significant relationship at least between career insight and developmental activities (Maurer & Tarulli, 1994). Furthermore, the correlations between reactions and the behavior measures were in the anticipated direction. A power analysis (Cohen, 1988) indicated that the power for detecting possible relationships between career insight and the behaviors and between reactions and the behaviors was .30 to .32. This suggests that, given additional power, significant positive relationships may have been detected between these variables, in addition to those already detected.

To summarize the results of examining this research question, evidence was found that reactions were significantly related to reported knowledge after the workshop and reported knowledge of individual development planning after the workshop was significantly related to reported levels of engaging in career development behaviors. This data provides some evidence of the traditionally

held beliefs that reactions are related to learning/knowledge and that learning/knowledge is related to behaviors. Some may argue that the significant relationship between reactions and knowledge after the workshop is a result of the variables being measured on the same survey, but such an argument can not be used to explain the significant correlation between knowledge of individual development planning and the behavior measures.

These results showing intercorrelations among the criteria for workshop effectiveness are in contrast to the suggestions made by Alliger and Janak (1989) suggesting that reactions to training may be independent of learning and behavior change. The results of the current study suggest that this is not the case, at least with respect to a career development workshop. This finding suggests that reactions are related to knowledge after the workshop. Future research needs to identify whether this relationship exists in other training programs or whether the phenomenon is unique to career programs. Further, the exact relationship between the variables needs to be clarified. Although this study demonstrated a relationship between reactions and knowledge and between knowledge and behavior, the causal relationships are unclear. This causality needs to be explicated further as it has important implications for both future research/theory and practice which will be discussed in more detail later in this chapter. In addition, practitioners can use this information in determining the structure and delivery of training programs. In conclusion, this study showed relationships among the training criteria that are consistent with previously held

beliefs but are inconsistent with suggestions made by Alliger and Janak (1989).

The exact relationships among the criteria needs to be studied more in the future to determine the exact nature of the relationships among reactions, learning/knowledge, and behaviors.

Results of Tests of Hypotheses

The primary focus of this study was to determine the relationships among several individual difference variables and the criteria for workshop effectiveness. Unfortunately, the results of the study were disappointing with respect to these hypotheses. One possible explanation for the generally nonsignificant results may be the lack of variance in many of the measures. It is also possible that a career development workshop is significantly different from a traditional training program and thus entirely different variables are related to its effectiveness. The following section will discuss the results of the hypothesis testing, discussing hypotheses related to each criteria of workshop effectiveness.

Factors Related to Reactions

Two variables, job involvement and perceived job insecurity, were expected to be positively related to reactions to the workshop. The relationship between job involvement and reactions to the workshop was not only nonsignificant but also near zero ($r=.04$). One potential explanation for this is

that it is not involvement in one's job that would be related to reactions to a career development workshop, but involvement in work in general or one's profession. Perhaps, it is simply an involvement in working that would be related to reactions not necessarily attachment to or involvement with a particular job. Although job involvement was not significantly related to reactions to the workshop, perceived job insecurity did have a significant positive relationship with reactions. This suggests that employees with more concern about the security of their jobs also reported more positive reactions to the workshop perhaps because the value of a career development workshop is more apparent to those who are concerned about losing their jobs.

The supplemental analyses also identified other variables that were significant predictors of reactions. When all the individual difference variables studied in this research were included in a regression equation, job insecurity, self-efficacy, and motivation to transfer all had significant positive beta weights while locus of control had a significant negative beta weight. The significant positive beta of job insecurity provides further evidence for the conclusion that those who have more concern about the security of their jobs also report more favorable reactions to the workshop. As discussed when developing the hypothesis, it is believed that this relationship occurred because those who fear losing their jobs are more likely to see the value in a workshop that assists them in planning and taking responsibility for their careers. The results of the

regression analysis suggest that, not only is job insecurity related to reactions, but that it contributes uniquely to the prediction of reactions.

Motivation to transfer and self-efficacy for engaging in career development behaviors also had significant positive beta weights in predicting reactions. These findings may be a result of multicollinearity as these variables were collected at the same time as reactions. However, these relationships could also be explained by a generally overall positive affect after participating in the workshop. The workshop may have left participants feeling positive in general, about the value and importance of planning one's career (resulting in motivation to transfer) and about themselves and their ability to conduct career development (resulting in high self-efficacy). It makes sense then that those participants who achieved these benefits of the workshop (the desire to transfer the behaviors and the feeling that one can be successful in career development efforts) would lead subjects to feel positive about the workshop overall (high reactions).

This rationale can not be used to explain the negative relationship between locus of control and reactions to the workshop. Locus of control had a significant negative beta in the prediction of reactions suggesting that subjects with a more internal locus of control had less positive reactions to the workshop. At first, it would seem that this relationship should be in the opposite direction. It is intuitively appealing to expect that subjects with an internal locus of control would have more positive reactions towards a workshop that encouraged

participants to take control over their careers, but the opposite relationship occurred. A potential explanation for this relationship may be that those with an internal locus of control already feel responsible for their careers and take the necessary steps to plan and achieve their career goals. Those with an external locus of control, however, probably do not do this as naturally and therefore may benefit more by being shown the value in doing that and given the necessary tools. Thus, participants with an external locus of control have more positive reactions because the workshop had a stronger impact on them in terms of changing their attitudes towards career planning.

In summary, several variables appear to predict unique variance in reactions to the workshop. Job involvement was not significantly correlated with reactions as expected. However, perceived job insecurity had a significant positive correlation with reactions as hypothesized as well as a significant beta weight when combined with the other individual difference variables in predicting reactions. Furthermore, three additional variables had important relationships with reactions to the workshop. Self-efficacy for engaging in career development and motivation to transfer the behaviors both had significant positive beta weights in predicting reactions. Finally, locus of control had a significant negative beta weight in the prediction of reactions.

Factors Related to Career Development Knowledge

It was hypothesized that motivation to learn would mediate positive relationships between job involvement, perceived job insecurity, and perceived supervisor support for career development and career development knowledge after the workshop (i.e., career insight and knowledge of individual development planning). Data did not support these hypotheses. The lack of significant results related to job involvement is an important finding given the previously mixed results regarding job involvement. Although previous research has found significant correlations between job involvement and motivation to learn (Noe & Schmitt, 1986), between job involvement and challenging job assignments (Kozlowski & Hults, 1987), and between work role salience and career insight (Noe et al, 1990), studies have also failed to find significant path coefficients between job involvement and motivation to learn (Deutsch & Barnes-Farrell, 1995; Mathieu et al, 1992; Noe & Schmitt, 1986) in models of training effectiveness. The data in this study suggests that, even in a career development workshop, motivation to learn does not mediate a relationship between job involvement and knowledge after the workshop.

Hypotheses suggesting that motivation to learn mediated relationships between perceived job insecurity and career development knowledge and between supervisor support for career development and career development knowledge were also not supported. One explanation may be that the relationships of job insecurity and supervisor support to the two measures of

career development knowledge are moderated by the extent to which participants value job security or supervisor support. This argument was made by Maurer and Tarulli (1994) in relationship to the role of supervisor support in employee participation in voluntary development activities. Specifically, they found that the more employees valued supervisor supportiveness, the stronger the relationship between supervisor supportiveness and interest and intentions to participate in development activities in the future. Applying that logic to this study, it may be that personal values for supervisor support and job security moderate a relationship between these variables and motivation to learn or between these variables and the adjusted measures of career development knowledge. This hypothesis can not be tested with the current data since information on the extent to which subjects valued supervisor support and job security was not collected. It is, however, an interesting explanation for the lack of significant results found in the current study.

Although the hypothesized mediated relationships were not supported, motivation to learn is significantly related to both career development knowledge variables ($r = .24$, $p < .001$ for career insight and $r = .19$, $p < .01$ for knowledge of individual development planning.) Thus participants' motivation to learn the material was significantly correlated with the amount of knowledge following the workshop. However, the variables predicted to be related to motivation to learn were not significantly related. Previous literature has also failed to identify individual difference variables which predict motivation to learn (cf., Deutsch &

Barnes-Farrell, 1995; Mathieu et al, 1992; Noe & Schmitt, 1986). In fact, Noe and Schmitt and Mathieu et al found no significant path coefficients leading to motivation to learn. Deutsch and Barnes-Farrell found significance only for intrinsic and extrinsic incentives, choice to attend training and two personality constructs, but generally not for the trainee characteristics. This suggests that research has failed to identify the appropriate individual difference variables that are related to motivation to learn and perhaps needs to consider some other more nontraditional precursors, such as situational constraints (cf., Mathieu et al, 1992) or context variables such as incentives and choice (cf., Deutsch & Barnes-Farrell, 1995). Furthermore, in this data, locus of control was significantly correlated with motivation to learn ($r = .34, p < .001$). This relationship was not hypothesized in this study because it was expected that locus of control would be more likely to be related to the more action-oriented variables, such as motivation to transfer and the career development behaviors. However, it appears that locus of control is an important variable in understanding motivation to learn and should be further investigated in the future.

Although motivation to learn has a significant positive correlation with both of the adjusted knowledge measures, it does not have a significant beta in the regression equations predicting each of the knowledge measures. This suggests that motivation to learn does not predict unique variance in these measures, perhaps because another variable has a stronger relationship with

the knowledge measures and absorbs whatever variance may have been explained by motivation to learn. In fact, when the knowledge variables were regressed on all the individual difference variables, only self-efficacy had a significant beta in the prediction of career insight, and self-efficacy and motivation to transfer had significant betas in the prediction of knowledge of individual development planning. This suggests that those subjects who had stronger beliefs in their abilities to engage in career development were more likely to have more career insight and more knowledge of individual development planning following the workshop. In addition, subjects who were more motivated to use what they learned in the workshop in their own career planning also were more likely to have more knowledge of individual development planning following the workshop. Furthermore, when all variables were entered into the equation, motivation to learn did not have a significant beta, while self-efficacy and motivation to transfer did, suggesting that they are stronger predictors of career development knowledge following the workshop. It may be that one of these variables (e.g., self-efficacy) acts as a mediator between motivation to learn and knowledge. This possibility should be further explored in additional research

The finding that self-efficacy and motivation to transfer are significant predictors of the knowledge measures has important implications for practitioners. It suggests that, to increase the likelihood of learning from the workshop, practitioners may want to either target career programs to those with

high self-efficacy for engaging in career development and high motivation to transfer, or try to engender high levels of self-efficacy and motivation to transfer in workshop participants. More specific recommendations along these line will be provided later in this discussion section.

Factors Related to Career Development Behaviors

Similar to the prediction of career development knowledge, several of the individual difference variables were hypothesized to be related to the career development behaviors of subjects after participating in the workshop. First, motivation to transfer was expected to mediate relationships between job involvement, perceived job insecurity and perceived supervisor support for career development and the career development behaviors. None of these hypotheses were supported, but it is suspected that lack of support for these hypotheses was due in part to insufficient power to detect relationships. Upon reviewing the correlation matrix, one can see that several of the correlations necessary for a mediated relationship are significant or are high positive and near significant. First, perceived job insecurity and job involvement have significant positive correlations with motivation to transfer ($r=.13$, one-tailed $p<.05$ for job insecurity and $r=.16$, one-tailed $p<.01$ for job involvement). In addition motivation to transfer has positive correlations with the adjusted measure of career planning ($r=.29$, $p=.052$) and the adjusted measure of seeking developmental activities ($r=.27$, $p=.07$). These relationship suggest that the

necessary correlations for a mediated relationship to exist are either significant or near significant in this sample. Therefore, lack of power may have prevented the detection of a mediated relationship. Future research is needed to test these hypotheses using a larger sample to determine whether or not these relationships exist.

Similar results were not found for perceived supervisor support for career development. Results suggest that supervisor support was not significantly correlated with motivation to transfer ($r=.02$; ns) or the career development behaviors ($r=.04$ for career planning and $r=.04$ for seeking development activities.) However, as discussed previously, Maurer and Tarulli (1994) found evidence that the degree to which subjects value supervisor support moderates the relationship between supervisor support and engaging in voluntary development activity. Their results provide a potential explanation for the lack of support for the hypotheses involving perceived supervisor support in this study.

In addition to the mediated relationships discussed above, two other hypotheses were presented related to the career development behaviors. First, locus of control was expected to be significantly positively correlated with the career development behaviors. This hypothesis was not supported by the data. However, the partial support for the hypothesis related to the moderating effect of self-efficacy suggests a positive relationship between locus of control and seeking developmental activities but only under conditions of high self-efficacy.

The hypothesis proposing that self-efficacy moderated a relationship

between locus of control and the career development behaviors was partially supported. The self-efficacy by locus interaction term was not significant in predicting career planning but was significant in predicting seeking developmental activities. Although a moderated relationship was detected for seeking developmental activities, it did not operate as expected. It was expected that higher levels of self-efficacy for engaging in career development would make a positive relationship between locus of control and the behavior even stronger. Instead, it was shown that there was a positive relationship between locus of control and seeking developmental activities under conditions of high self-efficacy but a negative relationship between locus of control and seeking developmental activities under conditions of low self-efficacy. In other words, when subjects believe they will be successful in planning their careers (high self-efficacy) then those with an internal locus of control are more likely to seek developmental activities. Hypothesis 4 proposing a positive relationship between locus of control and seeking developmental activities did not receive overall support. However, the graph of this moderated effect demonstrates that, under conditions of high self-efficacy, there is in fact a positive relationship between locus of control and seeking developmental activities. However, when subjects do not expect to be successful in planning their careers, then those with an internal locus of control are less likely to seek developmental activities. One potential explanation may be that those with an internal locus of control, who generally tend to take control over their lives, see no point in seeking

developmental activities if they expect to be unsuccessful in their development planning efforts. Those with an internal locus of control tend to take control over events because they believe they *can* control those events; when these individuals expect to be unsuccessful they may be less likely to seek development activities.

In addition to moderating the relationship between locus of control and seeking developmental activities, self-efficacy appears to have a direct relationship with the career development behaviors. In fact, when career planning and seeking developmental activities were regressed onto the individual difference variables, self-efficacy was the only variable with a significant beta weight, suggesting that self-efficacy explains significant unique variance in the prediction of the career development behaviors after participating in the workshop. Upon reviewing the items, it appears that the measure of self-efficacy is very similar to the measure of knowledge of individual development planning (e.g., "I understand the individual development planning process" (knowledge of individual development planning item) versus "I consider myself to be skilled in development planning" (self-efficacy item)). It was previously discussed that results indicated that knowledge of individual development planning was related to both behavior measures. If there is little distinction between knowledge of individual development planning and self-efficacy, then it makes sense that self-efficacy would also have a direct relationship with the behavior measures (as it was previously shown that knowledge of individual

development planning has a significant positive correlation with the behavior measures.) Method variance could potentially explain the high correlation between self-efficacy and knowledge of individual development planning suggesting that future research should use different methods to collect data on these two variables (e.g., use a knowledge test rather than self-report knowledge via a survey). In addition, future research should clarify the construct of self-efficacy for engaging in career development and further explore the relationship between self-efficacy and the career development behaviors.

Relationships of Variables with Demographics

Examination of the correlation matrix indicates that the demographic variables are significantly correlated with some of the other measures included in the study. Some of these relationships are intuitive while others may require further study to fully understand. Most of the significant relationships with age can be easily explained. Older subjects reported less motivation to learn the material and lower levels of perceived supervisor support for career development. These relationships may be explained by the fact that older individuals and their supervisors may perceive less value in learning about development planning as they will most likely be spending less time in the workforce than some of their younger counterparts. This explanation is feasible in this study as the age of subjects ranged from 23 to 64 with over 20% of subjects over age 50. Similar rationale can be used to explain the negative

relationships between organization tenure and motivation to learn and the adjusted measure of career insight. Specifically, those who have been in the organization longer may be expecting to spend less time in the workforce than those with less organization tenure and thus see less value in learning about career planning and are less concerned with gaining career insight. However, it must be remembered that all participants volunteered to attend the workshop so they most likely saw at least some value in attending, perhaps to make themselves more marketable for another job rather than to do long-term career planning.

One might expect that job tenure would have similar relationships as organization tenure or age with respect to these variables. However, that was not the case in this study. Correlations between job tenure and motivation to learn and supervisor support for career development were not significant. However, job tenure was significantly negatively correlated with job involvement, locus of control, and self-efficacy for engaging in career development. The negative relationship between job tenure and job involvement may be a result of nonwork issues becoming more important in people's lives as they age or are in the workforce longer. This is consistent with literature on career stages which states that, as people move towards midcareer, they re-evaluate their lives and often realize that other things (e.g., family, leisure) may be more important to them than work (Feldman, 1988). Another explanation may be that perhaps after spending a certain amount of time in a single job, one becomes less enamored

with that job, finds the job less fulfilling, and thus becomes less involved in the job. The explanation for the negative relationship between job involvement and self-efficacy may be that individuals experience more doubt in their abilities to succeed in development planning because they perhaps have not engaged in similar activities in the past, having remained in the same job for a long time and perhaps obtaining little career-related development while in that job. Or perhaps individuals with more job tenure are those who have been unsuccessful in past attempts to engage in development planning and obtain different jobs, and therefore doubt their abilities to be successful in future career development efforts. Finally, the negative relationship between job involvement and locus of control may be explained by the fact that individuals with a more external locus of control may be less likely to feel responsible for their careers and take the necessary actions to obtain a different job when one is desired.

The last set of correlations with demographic variables are the significant positive correlations between gender and motivation to learn, motivation to transfer, and self-efficacy. In this study, women reported higher levels of motivation to learn, motivation to transfer, and self-efficacy for engaging in career development behaviors than men. A possible explanation for these relationships is that women, in realizing the possible existence of a “glass ceiling,” may see the importance of career planning and may be motivated to learn and transfer the behaviors in an effort to get ahead. The result suggesting that women report higher levels of motivation to transfer are in contrast to results

reported by Tziner and Falbe (1993) suggesting that men have higher levels of motivation to transfer (their study did not include motivation to learn or self-efficacy so a comparison can not be made of results relating to those variables.) It is unclear why, in this study, women report higher levels of motivation to learn, motivation to transfer, and self-efficacy. It could be something unique to the sample of this study, either unique to employees in this organization or to employees who chose to voluntarily attend this workshop, or something unique to career programs as opposed to more traditional training programs.

Although potential explanations have been put forth for each of the significant relationships found between the individual difference variables and the demographics of the sample, none of these explanations can be confirmed or denied in this study. Future research should take into account these relationships and attempt to determine if they are generalizable past this sample, and if so why they exist. It should be noted that, because there were significant relationships with demographic variables, all analyses were also conducted controlling for demographic variables in the first step of the regression equation. There were no significant changes in results when controlling for demographic variables.

Contributions of the Study

This study makes several contributions to the field of career development. As this study was one of the first attempts to examine the perceived

effectiveness of a career development program, all of the information resulting from the study, even those hypotheses which were not supported, provide important information that will further the field of career development. Specific contributions and implications for theory/research and practice will be discussed below.

Contributions/Implications for Theory and Research

One of the first contributions results from examining the intercorrelations among the reaction, knowledge, and behavior measures. The results provide important information for research in the area of training effectiveness. Traditionally, it has been believed that reactions were related to learning and that learning was related to behaviors. However, previous research has failed to corroborate this assumption. In fact, Alliger and Janak (1989) provided evidence that reactions may be unrelated to the other criteria. The results of this study provide evidence that reactions were related to knowledge after the workshop and that knowledge of individual development planning was related to career development behaviors after the workshop. This finding is important because it suggests that the criteria of reactions, knowledge and behavior should not be considered independently. Additional research is needed to determine the causal relationships among the variables in order to further the theory surrounding training effectiveness. For example, if future research determines that positive reactions are not only related to knowledge but are a necessary

pre-condition for learning to occur, then reactions becomes an even more critical variable in the study of the effectiveness of training programs. In addition, if it is shown that learning and behavior measures are highly correlated, then they may be able to serve as substitutes for each other in training evaluation studies. This would be an important finding since it is often difficult to collect multiple criteria of training effectiveness. Overall, these results remind us that the propositions of Alliger and Janak were preliminary and need further investigation.

One of the most important contributions of this study to theory and research is the identification of the important role played by self-efficacy. Self-efficacy consistently had a significant positive beta weight in predicting the criteria for workshop effectiveness. Previous research has rarely included self-efficacy in the study of training effectiveness or career-related variables such as engaging in developmental activities. Based on this study, the failure to include self-efficacy in the study of training and career programs has been a gap in the literature. Self-efficacy not only has a strong beta in the prediction of the behavior criteria but also in the prediction of reactions and the knowledge criteria. Furthermore, although motivation to learn has a significant positive correlation with the adjusted knowledge measures, the beta weight in predicting these variables is not significant, but the beta for self-efficacy is significant. It is possible that self-efficacy acts as a mediator between motivation to learn (and perhaps other of the individual difference variables) and the knowledge measures. This type of mediated relationship would explain the lack of a

significant beta from motivation to learn to the knowledge measures in spite of the significant correlation between the two variables.

This significant role of self-efficacy in predicting reactions, knowledge and behaviors has two primary implications. First, as discussed above, it points to a clear gap in previous literature and suggests that theories of training and/or career program effectiveness should incorporate self-efficacy into their models. It also suggests that researchers should more consistently include self-efficacy as a major contributing factor in the effectiveness of such programs. Furthermore, if the role of self-efficacy is confirmed in further research in the area, then studies also need to begin looking at how to increase self-efficacy in order to increase the likelihood of successful training programs.

This pervasive role of self-efficacy also calls into question how future research should consider this variable. Self-efficacy may be best thought of as a personality variable and, as such, the specific task or activity referred to is unimportant. In other words, the general personality variable of self-efficacy, rather than the specific variable of self-efficacy for career development, may be the key factor driving many of the outcomes of this workshop. This would suggest that self-efficacy is a trait of the individual and would not vary by task or activity. This would further suggest that the personality of subjects (self-efficacy being one personality variable) influences reactions, knowledge, and behavior after participating in a workshop. Self-efficacy as a personality variable should be further examined in future research.

The role of supervisor support needs to be further developed in future models of workshop effectiveness. Previous research has suggested that supervisor support is a critical variable in studying training effectiveness. In the current study, supervisor support for career development did not appear to have a significant relationship with the criteria studied which may suggest that the role of supervisor support in career development programs is different from the role of supervisor support in more traditional training programs. This again points to a gap in current theory as previous research has suggested a clear role for supervisor support. Apparently, the role of supervisor support is more complex than previously thought, at least with respect to career development programs.

It would appear that the role of supervisor support may be an issue where research specific to career development programs may deviate from models of training effectiveness. Previous research on supervisor support has focused more on traditional training programs which are more skill-based and which may therefore require supervisor support in order to transfer the different behaviors to the job. Because the training program studied in the current research (e.g., the career development workshop) was not as skill-based, it may be easier for participants to transfer behaviors without supervisor support. For example, career planning is often done privately and therefore may not require supervisor support. Furthermore if developmental activities pursued also have benefits for current job performance, the supervisor may be supportive of pursuing those activities without being supportive of career development per se. In addition,

employees may have attended the workshop to obtain career skills that would allow them to move to a different job or career. Because the information gained in such a workshop is not limited to a specific job, it may not be as necessary to have support from the supervisor of that job.

Another potential explanation for the lack of significance for supervisor support in this study is that the role of supervisor support may be moderated by the extent to which the subject values supervisor support. Maurer and Tarulli (1994) provide evidence that the relationship between supervisor support and participation in voluntary developmental activities is contingent on the extent to which the individual values supervisor support. It is possible that the same relationship is occurring in this study which would imply that the moderating effect of values extends past just predicting participation in voluntary development activities but also to predicting career planning and knowledge after participation in a workshop. Future research needs to further examine this relationship and determine what role, if any, supervisor support plays in the perceived effectiveness of a career development workshop.

The general lack of support for the hypotheses in the current study suggests that either the variables studied operate differently than expected or that there are other variables that have not been previously considered in the context of career development that may be important. Several possibilities exist for other relationships among the variables studied. As suggested previously in this discussion, there is some preliminary evidence that self-efficacy may

mediate some of the relationships. Motivation to learn has a significant correlation with the knowledge measures, but in the regression with all individual difference variables as predictors, motivation to learn does not have a significant beta while self-efficacy does. This suggests that self-efficacy could be absorbing the variance explained by other variables. In addition, other variables not included in this study could mediate the relationships between the motivation measures and the outcome measures. For example, motivation to learn may lead to effort to learn but actual learning may be contingent on other variables (e.g., congruence between training strategy and learning style). It is often hypothesized that motivation to learn results in learning but this study suggests that other variables are operating in that relationship.

Another possible revision in the model is to test motivation to learn and motivation to transfer as moderators. For example, it was hypothesized that job involvement would be related to knowledge through motivation to learn. Perhaps instead, motivation to learn moderates the relationship such that job involvement is related to knowledge after the workshop only when the participant also has high motivation to learn.

It is also possible that the variables studied were not the appropriate ones to consider in examining the perceived effectiveness of a career development workshop. Perhaps other variables from the training or career development research need to be added to the model. For example, other variables previously studied in the training literature that may need to be considered

include incentives for attending the workshop, expected outcomes of the workshop, or congruence of the workshop content with trainee need or expectations. In addition, it may be that a career development workshop is sufficiently different from traditional training programs that a completely different set of variables is important in predicting effectiveness. Career variables such as career stage and distance from career goal, which are not traditionally included in training research, may be the most important variables in explaining the perceived effectiveness of a career development workshop. These variables may be directly related to the knowledge and behavior measures or may result in motivation to learn and motivation to transfer. Organizational variables may also be important to understanding the perceived effectiveness of the workshop. These variables would include organizational policies towards development and career planning, reinforcement of such activities, organizational stability, and perceived organization support for employees. It is possible that these variables have such a strong influence on the actual engagement in career development behaviors that individual difference variables are insignificant.

In summary, theory and research need to consider the similarities and differences between traditional training and career development workshops and between career development workshops and other career development programs. It was expected in this study that a career development workshop would represent a sort of hybrid between training and career development, but the resulting hypotheses were generally not supported. This suggests the need

for additional theory development in the area of careers which considers different relationships among the variables studied and the inclusion of alternative variables.

Contributions/Implications for Practice

The results of the first research question examined in the current study point to the effectiveness of the career development workshop. This study demonstrated that participants had positive reactions to the workshop, had more career insight and knowledge of individual development planning following the workshop, and conducted more career planning after attending the workshop. These results provide important evidence of the potential benefits of career development programs and provide practitioners with valuable information as they consider implementing similar career programs.

As discussed in Chapter II, authors have previously cited benefits of career programs but rarely provide evidence on whether those espoused benefits are achieved. This research demonstrated that in the case of the career development workshop studied, some of those benefits were in fact achieved, specifically giving subjects career insight and knowledge of individual development planning as well as encouraging more career planning. Thus, when considering the implementation of a career program, practitioners should consider what they hope to achieve. If the primary goal is to increase the extent to which employees seek developmental activities, then a workshop may not be

the answer as there was not a significant increase in the extent to which subjects reported seeking developmental activities. However, if the practitioner is hoping to increase career insight, knowledge of individual development planning and/or career planning efforts, then a career development workshop, especially the particular used in the current study, may be the appropriate initiative.

Another implication of the results is that it may be important to consider multiple criteria for effectiveness when implementing a career development workshop. The results of this study suggest that there are intercorrelations between reactions and knowledge after the workshop and between knowledge and behaviors after the workshop. Specific recommendations can not be made as the data does not allow conclusions about causality. However, because conclusions can not be made about whether one criteria causes another, practitioners should monitor all criteria as opposed to concentrating on just one. In other words, practitioners should not discount the importance of positive reactions to the workshop as reactions were related to knowledge after the workshop. Therefore, when implementing a career development workshop, practitioners should strive to improve reactions to the workshop by demonstrating the value of the workshop for participants, ensure that learning has occurred either through self-report knowledge or learning tests, and monitor whether the desired behaviors are exhibited after the workshop. The suggestion to consider multiple criteria of effectiveness is consistent with

previous recommendations in the training and career development field (e.g., Gutteridge, 1986)

The significant relationship between perceived job insecurity and reactions to the workshop also has important implications for the practice of career development. Perceived job insecurity had a significant positive correlation with reactions as well as a significant beta when reactions was regressed on all the individual difference variables studied. This suggests that employees can perceive the value of a career development workshop even in times of uncertainty in their jobs. This is critical as more and more companies are downsizing today (Rothstein, 1994; Uchitelle & Kleinfield, 1996) and more people may perceive their jobs to be insecure. Some may believe that times of instability in an organization are inappropriate times for the implementation of a career program because employees would be too concerned with the short-term security of their jobs to concentrate on the value of long-term development planning. However, subjects in the current study who reported higher perceived job insecurity also had more positive reactions to this career development workshop. This is an important finding because an unstable time may be one of the best times to implement career programs because it becomes even more critical that employees are considering their futures in the company and ensuring that they have marketable skills to offer their current and/or future employers. The results of this study suggest that unstable times may not only be good times for career planning programs from the organization's standpoint but also from

the employee's standpoint. Thus practitioners who want to increase the likelihood that workshop participants will have positive reactions may want to consider targeting career development workshops to departments experiencing transitions that may result in the loss of jobs or to particular employees with high perceived job insecurity.

Perhaps one of the most important implications for practice is to consider the role of self-efficacy in the perceived effectiveness of the workshop. In this study, when the five criteria of workshop effectiveness were regressed on the individual difference variables, self-efficacy for engaging in career development consistently had a significant positive beta weight. Subjects who had higher levels of self-efficacy reported more positive reactions to the workshop, were more likely to report higher levels of career insight and knowledge of individual development planning after the workshop, and were more likely to report more career planning and higher levels of seeking developmental activities after the workshop. This was the most consistent finding of the study and should not be ignored in the career development field.

The role of self-efficacy has two primary implications for career development practitioners. One implication is that perhaps career programs should be targeted to those employees who have higher levels of self-efficacy for engaging in career development in order to increase the likelihood of a successful program. A more valuable suggestion, however, may be to use the career program to increase the level of self-efficacy of participants. For

example, the beginning of a workshop could focus on increasing participant's self-efficacy so that they may be more likely to attain the benefits of the workshop. This may be accomplished via such simple activities as having other employees describe how they recently achieved a career or development goal to assist workshop participants in understanding that others similar to them have gone through a similar process and were successful.

The supplemental analyses conducted also suggest that motivation to transfer plays an important role in predicting reactions to the workshop and the adjusted measure of knowledge of individual development planning. To the extent that the practitioner wants to increase reactions and knowledge of individual development planning, they should consider methods to increase motivation to transfer. Baldwin and Ford (1988) suggest that goal-setting and feedback can be successfully used to increase the motivation to transfer new skills. Broad and Newstrom (1992) offer multiple transfer strategies that can be used by the trainer, the trainee, or the trainee's supervisor before, during and after the training. Some of their recommendations that seem particularly relevant in the context of a career development workshop include aligning the program with the organization's strategic plan, incorporating peer coaching, having participants create action plans, and offering refresher sessions. It is unclear whether the transfer strategies offered by Baldwin and Ford and Broad and Newstrom would be successful in career programs where the skill transfer is not as clear as it often is in more traditional training programs. Furthermore,

previous research has focused on ways to increase motivation to transfer in order to increase the use of the skills taught in the training. However, in this study, motivation to transfer is significantly related to reactions and knowledge of individual development planning as opposed to the behaviors making it uncertain if previously offered transfer strategies would be applicable. Perhaps practitioners should focus on simple techniques for enhancing motivation to transfer such as providing participants with concrete examples of how using the information provided in the workshop in their own career planning can help them to be more successful in achieving their career or development goals. Another strategy may be to focus career programs on those who are more likely to be motivated to transfer the behaviors such as employees considering a career or job change or employees affected by a downsizing.

Limitations

Although this study has several important contributions to the field of career development, it does suffer from some limitations. First, because data was required from several different surveys conducted over several months, attrition occurred during the course of the study. The benefits of this semi-longitudinal study design was that all data was not collected at one point in time thus reducing the risk of multicollinearity. However, one of the problems with conducting longitudinal research is the risk of attrition resulting in small sample sizes and sometimes unrepresentative samples. Data presented in Chapter III

suggests that this sample was representative in terms of the individual difference variables studied, but the final sample for the analyses involving career development behaviors was very small. This small sample size perhaps prevented the detection of some effects due to insufficient power. Future research could avoid this problem by conducting the study with a larger initial sample size and by taking measures to increase responses on follow-up surveys that were not possible in this study.

Another limitation of the study relates to the measures used for determining career development knowledge and behaviors. Specifically, career development knowledge was determined by asking subjects whether they had knowledge of a particular area (e.g., individual development planning) as opposed to testing them by asking test-like questions about the subject area. However, for the knowledge measures used in this study, it was felt that self-reported learning would be appropriate. For example, without knowing a person's strengths or interests (e.g., career insight) you can not test them on the accuracy of their knowledge of those strengths or interests. In addition, it would be impossible to provide subjects with comprehensive knowledge/career insight in such a short period of time. Instead the workshop focused on giving subjects some initial career insight which could be used in development planning while encouraging more comprehensive self-assessment throughout one's career.

Self-reported knowledge of individual development planning also seemed appropriate in the context of this career development workshop. The primary

reason for this decision was that the goal of this workshop was not to teach participants specific details about development planning, but to provide them with a general understanding and familiarity with the steps and the information available to them to assist in their development planning efforts. The workshop was a sort of overview of career planning that encouraged participants to go through a well-thought out process when creating career or development plans but did not require subjects to acquire specific, detailed, testable knowledge about development planning. The primary goal of the workshop was to give participants tools to refer back to in their development planning and to assist participants in understanding the value of setting goals and identifying activities to achieve those goals.

It was felt that self-reported behavior measures were appropriate for similar reasons. First, there are few observable, objective measures of career planning as it often occurs within the mind of the individual. In addition, without a formal tracking system in place, the only available data on seeking developmental activities is self-report or others' perceptions. This study attempted to collect both self-report measures of behaviors and supervisor measures of behaviors. Unfortunately there was insufficient data to allow analysis of the data provided by supervisors. Future research should continue to attempt to collect supervisor measures of career development behaviors. One way to increase the response rate may be to send surveys directly to the supervisor as opposed to having subjects distribute surveys to their supervisor.

If the only option is to have subjects distribute the surveys, it may help to include a cover letter written directly to the supervisor explaining the value of completing the survey, as opposed to the short instructions provided on the survey used in this study. Furthermore, visible top management support for the career program and the evaluation of the program may give supervisors more incentives for completing the surveys and thus improve the response rate. In addition to improving the response rates on supervisor surveys, future studies should try to obtain more objective measures of both knowledge and behaviors (e.g., reviewing formal development plans for evidence of career planning) to allow increased confidence in the results.

Another limitation of the measures used in this study is that several measures suffered from a lack of variance which may have made it difficult to detect relationships. The lack of variance in some of the individual difference variables (e.g., motivation to learn, motivation to transfer) may be in part explained by the voluntary nature of the workshop. Perhaps studies of career programs which are not voluntary in nature would not have the same problem. Such programs may include development planning workshops which are part of a mandatory training curriculum, development planning activities associated with a performance review process, or formal, assigned mentoring programs. Studies involving career programs in which participation is required by the organization may have fewer problems with lack of variance, especially in the motivational measures.

In addition to the lack of variance in some of the individual difference variables, there was also little variance in reactions and post-test measures of career insight and knowledge of individual development planning which may have resulted from the success of the workshop. In order to have more variance in these measures, the workshop must have differing impacts on individuals; there must be some individuals in the workshop who do not have positive reactions or do not have knowledge of the content after participation. This presents a significant dilemma for the study of career programs and training in general in that it may be difficult to detect important outcomes of highly successful programs in which all participants have positive reactions and learn the content, unless the effect sizes or sample sizes are very large.

This study also suffered from limitations related to the collection of the data. Specifically, all measures were self-report and were collected via a survey. Although attempts were made to collect some measures from supervisors and to obtain more objective measures of career planning, these efforts were unsuccessful in this study. Although common method bias may not be as big a problem as once thought (cf., Bagozzi & Yi, 1990; Crampton & Wagner, 1994; Spector, 1987), it is still a concern. However, the collection of data collected through a series of surveys at three different points in time (rather than a single instrument at one point in time) should have minimized potential bias. Also, the many nonsignificant relationships in the correlation matrix suggest that method bias was not a major problem in this study. In addition,

McEnrue (1989) has stated that self-report data can be critical to the study of phenomenon in which individual perceptions are important. This study is one such case in that it is the individual's perceptions of supervisor support for career development or perceptions of job insecurity, for example, that are critical whether or not those perceptions are accurate. Nonetheless, future research would benefit from collecting some of the measures, especially the criteria, from other sources such as supervisors, co-workers, or more objective measures. For example, knowledge could be measured with a knowledge test rather than self-report knowledge and behaviors could be measured by collecting data from supervisors or coworkers as well as from reviewing formal development plans that are part of organization records.

There are also several factors which may limit the generalizability of this study. First, the context in which this study was conducted may limit generalizability. Data was collected from employees in a single quasi-government organization which was experiencing a significant amount of transition (e.g., budget cuts, restructuring, downsizing). It is unclear whether this type of transition, employees' reactions to the transition, and/or the quasi-government status of the organization may have made the sample unique. If so, this would limit the generalizability of the findings to other organizations experiencing similar transitions.

Another limitation of the study was the voluntary nature of the workshop. Data presented in Chapter III indicated few significant differences between those

who attended the workshop and other employees in the organization. However, the possibility exists that certain types of employees were attracted to this workshop and there may have been differences between this sample and others in the organization on unmeasured but possibly important variables (e.g., perceptions of whether attending the workshop would make the employee more marketable, either within or outside the organization.)

The workshop itself may also limit the generalizability of the findings. Only one career planning workshop was examined so the results may have been unique to this workshop as conducted in this organization. However, this workshop did follow the general outline of standard career development workshops (self-assessment, organizational assessment, goal-setting, and development planning.) Additional research should examine the effects of this workshop in other organizations to determine the generalizability of the workshop.

Future Research

This study points to several avenues for future research. First, future research needs to be conducted which avoids many of the limitations of this study. For example, research should be conducted using a larger sample size that would provide sufficient power to detect any relationships. This study, although having an acceptable number of subjects for some of the analyses, did suffer from attrition resulting in few subjects with data on behaviors after

participating in the workshop. Future research should start with a very large sample size so that there is sufficient data even if significant attrition occurs in the course of the study.

Another methodological issue that should be addressed in future research is the source of the data. Although attempts were made to collect data from supervisors in this study, there was insufficient data to analyze supervisor reports of behaviors. As discussed earlier, additional efforts should be taken to increase response rates of supervisors in similar studies conducted in the future. It may also be appropriate to collect perceptions of behaviors from other sources that interact with the workshop participant on a regular basis, for example co-workers or team members. Another possible source of data in some organizations would be written documentation of formal career plans developed by employees or data from a training/development tracking system that could provide more objective data on seeking/participating in developmental activities. Ideally, future research should explore these other sources of data in order to avoid concerns about self-report or mono-method bias.

Because this study focused on a voluntary career program, specifically a voluntary career development workshop, future studies should consider and explore possible differences in the factors related to the effectiveness of an involuntary career program (e.g., a career development workshop that is part of a mandatory training curriculum). Such studies would allow comparison of the similarities and differences in the processes related to the success of such

programs, particularly if the study was designed so that some subjects volunteered to participate while others were required. An added benefit of research on career programs which are not voluntary in nature may also be a potential increase in the variance of some of the measures as well as the generalizability of the results.

Future research would also benefit from using more objective measures of knowledge and behavior. For example, studies could incorporate knowledge tests to determine actual learning of course content as well as self-reported learning. This would also allow a comparison of the two types of measures of knowledge to determine if there is convergence between the self-report and objective measure. As discussed above, more objective behavior measures could be attained by reviewing formal development plans or training records. Again, research would benefit from having a more objective measure of the criterion and from being able to compare results using the self-report, supervisor/other report, and objective measures of behaviors to determine if there is convergence.

Another measurement issue to be resolved in future research is further development of the constructs under study and their measurement. For example, it appears that in this study there may not have been sufficient differentiation between the self-efficacy for engaging in career development items and the knowledge of individual development planning items. In addition, the two behavior measures, career planning and seeking developmental

activities, are highly correlated in this study. Future development of these constructs and measures is necessary to determine whether the concepts are distinct and, if so, how to differentiate them when collecting data.

More longitudinal research is also needed in the career development field. The results of this study suggest that subjects reported more career planning three to six months after participating in a career development workshop than before the workshop. However, it is unclear how long these effects may last. Perhaps the level of career planning decreases with time because individuals do not feel they have time to engage in career planning. However, it is also possible that individuals are rewarded for career planning and thus continue to engage in more career planning as time passes. Longitudinal research is needed to determine such long-term effects of career development workshops and other career programs.

This study also points to future research issues other than those associated with the methodology of the study. This study suggests that self-efficacy may be the most important predictor (of the variables studied) of reactions, knowledge, and behavior. The specific role of self-efficacy needs to be further examined in future research. In the current study, self-efficacy for engaging in career development had a significant beta weight in the prediction of each of the criterion variables. Although it is apparent that self-efficacy is an important factor to consider, the exact role of self-efficacy is unclear. For example, it may be that self-efficacy is a mediator of some of the other variables

(e.g., motivation to learn) and that those variables result in individuals who expect to be more successful in development planning and therefore engage in more career development behaviors. This may also explain why some of the other variables (e.g., motivation to learn) are correlated with outcomes but do not have significant beta weights if they are operating through self-efficacy. It is also unclear whether activity-specific self-efficacy (e.g., self-efficacy for career development as measured in this study) is critical or whether a more general self-efficacy (as a personality variable) is the driving force behind these results. It may be that some individuals have high self-efficacy in general, and expect to be successful in whatever activity they engage in. In such a scenario, whether the individual has high self-efficacy for career development is less important than whether the individual has high self-efficacy in general for any task.

Because self-efficacy does appear to play an important role in the career development process, future research also needs to address how to increase self-efficacy. For example, career development workshops such as the one studied may be effective not only at increasing knowledge or encouraging more career development behaviors but also at enhancing self-efficacy of participants. If self-efficacy does in fact predict these career-related outcomes, then the field needs to identify ways to increase self-efficacy, either through career programs or other ways. Future research should thus explore a variety of ways to enhance self-efficacy for engaging in career development programs.

In addition, future research in this area should include additional and/or different predictor variables. For example, other variables from the training evaluation literature (e.g., training incentives, choice) or the career development literature (e.g., career stage, distance from career goal, company orientation towards development) should be studied. Also, the role of personal values needs to be further examined in the context of career programs. Maurer and Tarulli (1994) suggest that values are important moderators of engaging in voluntary developmental activities. It is unclear whether a similar relationship exists for learning from a career program or for other career development behaviors. Future research could extend this study and the work of Maurer and Tarulli by investigating other individual difference variables and considering a possible broader role of values than that proposed by Maurer and Tarulli.

Studies should also consider antecedents of workshop effectiveness other than individual difference variables. For example, organizational variables may be critical to the success of career programs and also may be more easily controlled by the organization. Such organization variables may include organizational attitudes towards development, perceived organizational support, and organizational policies (e.g., policies regarding tuition reimbursement or paying dues for professional memberships). Organizations may be more successful in changing these organizational variables to assist in achieving desired benefits of career programs rather than trying to change their employees (e.g., by increasing self-efficacy). It is also possible that the organizational

variables have such a strong impact on such variables as motivation to learn and transfer or engagement in career development behaviors that they override any potential impact of individual difference variables. For example, maybe hypotheses related to supervisor support were not supported because organizational variables such as policies or development culture overwhelm the presence or lack of supervisor support. Future research should explore the role of organizational variables and the relative strength of organizational versus individual variables in predicting the outcomes of career programs.

The above suggestions for future research point to several alternative frameworks that should be studied, particularly in attempting to explain knowledge and behavior after the workshop. First, self-efficacy should be explored as a mediator between the motivation variables (motivation to learn and motivation to transfer) and the outcome variables (knowledge and behavior after the workshop). Also, the extent to which the employee values supervisor support should be examined as a moderator of the relationships between supervisor support for career development and knowledge and behavior after the workshop. Organizational variables (e.g., policies, attitudes towards development) should be included in future frameworks. It may be that organization variables act as moderators such that there is a positive relationship between individual difference variables and outcomes only when organizational variables are supportive of career development. In addition, motivation to learn may influence knowledge/learning through variables such as

effort to learn. Thus effort to learn should be explored as a mediator of that relationship. Finally, variables such as choice to attend the workshop, career stage, and distance from career goal should be studied as predictors of workshop effectiveness.

The framework in this study focused on the outcomes of a career development workshop in particular, but similar research questions exist for other potential outcomes of workshops and other career programs. For example, other potential outcomes of a career development workshop may include increased career communication with supervisor, increased knowledge of career opportunities, or better matches between individual and organizational career plans. Studies may also want to go beyond looking simply at whether participants seek developmental activities but also look at whether they actually engage in development activities or whether they seek or engage in activities which will actually assist them in achieving career goals. Furthermore, this study looked only at the outcomes of a career development workshop but the extent to which other career programs achieve desired outcomes remains unstudied. Future research should conduct similar studies to determine the effectiveness/outcomes of other types of career programs. Such studies should examine the relationship of a variety of individual difference variables to a variety of outcomes of other career development programs (e.g., computerized career assessment/development programs or career resource centers.)

More rigorous studies of career development workshops are also needed. In this study, pre-test measures were not collected from the comparison group making it difficult to conclude whether the increased knowledge and career planning of subjects is in fact a result of the training program. This study also did not manipulate any variables related to the workshop itself. Manipulation of workshop variables (e.g., content, training techniques) would provide valuable information for the design of such workshops. Currently, we have no information regarding what parts of the workshop were critical to achieve the desired outcomes.

This study also points to several relationships between demographic variables and the variables of interest for this study which have potential implications for future research. Additional research is needed to determine if the results related to gender differences are generalizable and, if so, to further understand why they exist. There are also other results which could have important implications for career programs in general. For example, if older individuals or employees with more organization tenure do in fact have lower levels of motivation to learn, what are the implications for career development for those individuals? Perhaps career programs which include older individuals or employees with more organization tenure need to emphasize the value of career development and development planning at any stage in one's life, career, or organization membership in order to achieve the desirable outcomes for these individuals.

Concluding Remarks

Although career development programs have been gaining in popularity in many companies, there continues to be little research to increase our understanding of the factors which influence the effectiveness of such programs. This study was an initial attempt at identifying potential individual difference variables that may predict the effectiveness of a career development workshop. Continued research in this area is necessary to determine the appropriateness of the framework presented and to continue to establish a theoretical foundation to aid in the understanding of career programs in organizations.

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APPENDICES

APPENDIX A
POWER ANALYSIS

Based on Cohen's (1988) Formula for Multiple Regression and Correlation Analysis*

Significance Level = .05 (by convention)

$$u = 1 \quad w = 1$$

$$f^2 = .15 \text{ (by convention for medium effect size)}$$

For regressions with knowledge:

$$N = 233$$

$$v = N - u - w - 1 = 230$$

$$\lambda = f^2(u + v + 1) = 34.8$$

$$\text{power} = .99 \text{ (from Table 9.3.2)}$$

For regressions with behavior:

$$N = 29$$

$$v = N - u - w - 1 = 26$$

$$\lambda = f^2(u + v + 1) = 4.2$$

$$\text{power} = .48 \text{ (from Table 9.3.2)}$$

*From: Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

APPENDIX B

PILOT STUDY

A pilot study was conducted to determine if the measures had adequate psychometric properties. Pre-tests were distributed to 58 employees. Forty-six completed pre-tests were returned for a response rate of 79.3%. Post-tests were distributed to 48 employees who participated in the workshop, immediately after the workshop. Forty-six post-tests were returned for a response rate of 95.8%.

Table A.1 presents the demographic statistics for the pilot sample. Summary statistics for the original scales used in the pilot study are presented in Table A.2, including number of items, number of cases, means, standard deviations, ranges, and coefficient alpha estimates.

Based on the pilot study, some of the measures were changed slightly to enhance their psychometric properties. Items were selected for the final scales based on their variance and their item-total correlations. Items with insufficient variance and/or low item-total correlations were dropped from the scales.

Several other changes in scale items were made. Additional items for job involvement were included in the final scale in an attempt to improve the internal consistency. In the pilot study, the Rotter (1966) locus of control scale was used, and did not have sufficient psychometric properties. Thus, it was decided to use the Paulhus (1983) personal efficacy scale to measure locus of control,

Table A.1.

Demographic Statistics for Pilot Sample (N = 52)

Variable	N	Mean	Standard Deviation	Range
Age	50	41.2 years	8.2	25-55
Company Tenure	50	13.9 years	6.8	1-28
Job Tenure	41	11.7 years	8.5	1-28

Variable	Number	%
Gender		
Male	20	38.5 %
Female	32	61.5 %
Race		
Caucasian	43	86.0 %
African American	7	14.0 %
Other	0	0 %

Table A.2.

Summary Statistics for Original Measures Used in Pilot Study

Variable	# Items	N	Mean	Standard Deviation	Range	Cronbach's Alpha
Jon Involvement	5	45	2.81	.63	1.4-4.0	.51
Job Insecurity	6	46	3.10	.80	1.3-5.0	.89
Supv Support	7	46	3.27	.89	1.0-4.9	.95
Locus of Control	10	45	3.36	.40	2.4-4.5	.49
Motiv to Learn	6	46	4.22	.52	3.0-5.0	.90
Motiv to Transfer	6	44	4.30	.47	3.0-5.0	.91
Self-efficacy	4	46	3.88	.55	2.3-4.8	.72
Reactions	5	46	4.20	.60	2.4-5.0	.92
Car Insight (Pre)	7	45	3.59	.54	1.9-4.4	.84
Car Insight (Post)	7	46	4.06	.49	2.4-5.0	.86
Knowl - IDP (Pre)	7	45	2.83	.57	1.3-4.4	.68
Knowl - IDP (Post)	7	45	3.63	.48	2.6-4.7	.66
Career Plng (Pre)	8	45	2.67	.57	1.7-4.3	.78
Career Plng (Post) ¹	n/a	n/a	n/a	n/a	n/a	n/a
Dev Activitiy (Pre)	7	46	3.38	.66	2.3-4.9	.86
Dev Activity (Post) ¹	n/a	n/a	n/a	n/a	n/a	n/a

¹Follow-up measures of career planning and seeking developmental activities were not available for the pilot study.

as described in Chapter III. Minor changes in wording were made on the tenure items for the final survey to avoid confusion between job tenure and company tenure. The scales reported in Chapter III are the revised scales which were used on the final version of the survey.

APPENDIX C

FINAL ITEMS USED IN DATA ANALYSIS

Job Involvement (Lodahl & Kejner, 1965)

1. The major satisfaction in my life comes from my job.
2. The most important things that happen to me involve my job.
3. I am very much involved personally in my work.
4. There is purpose to my life, and my work is a meaningful part of that purpose.
5. I live, eat, and breathe my job.
6. Sometimes I lie awake at night thinking ahead to the next day's work.
7. I'll stay overtime to finish a job, even if I'm not paid for it.

Perceived Job Insecurity (adapted from Kuhnert et al., 1989 and Kuhnert & Palmer, 1991)

1. I am afraid of losing my job.
2. I'm not sure how long my job will last.
3. I worry about losing my job.
4. I believe my current position may be in jeopardy.
5. I believe I may lose my current position in the near future.
6. It is probable that my current position may not last long.

Perceived Supervisor Support for Career Development (adapted from Noe et al., 1990 and Noe & Wilk, 1993)

1. My supervisor spends time helping me with career planning.
2. My supervisor is supportive of my efforts to acquire new knowledge.
3. My supervisor encourages me to learn new things.
4. My supervisor supports me in my individual development planning.
5. My supervisor is interested in my career planning efforts.
6. My supervisor is willing to spend time helping with my career planning.
7. My supervisor encourages me to set career goals.

Locus of Control (Paulhus, 1983)

1. When I get what I want it's usually because I worked hard for it.
2. When I make plans I am almost always certain to make them work.
3. I prefer games involving some luck over games requiring pure skill.
4. I can learn almost anything if I set my mind to it.
5. My major accomplishments are almost entirely due to my hard work and ability.
6. I usually don't set goals because I have a hard time following through on them.
7. Often people get ahead just by being lucky.
8. It's pointless to keep working on something that's too difficult for me.

Motivation to Learn (adapted from Baldwin et al., 1991, Noe & Schmitt, 1986, and Noe & Wilk, 1993)

1. I am willing to exert considerable effort in learning this material.
2. I am motivated to learn everything I can about career management.
3. It is very important to me that I learn a lot from this workshop.
4. I will strive to learn all I can about career management.

Motivation to Transfer (adapted from Noe & Schmitt, 1986 and Noe & Wilk, 1993)

1. I plan to use what I learned in order to do my individual development planning.
2. I will apply what I learned in this workshop when writing career goals and plans.
3. My purpose for participating in this workshop was to learn material that I can use in my career planning.
4. I am motivated to use the workshop information for my career planning.

Self-efficacy for Career Development (adapted from Noe & Wilk, 1993)

1. I am confident in my ability to do individual development planning.
2. I expect to be successful in my career planning process.
3. I consider myself to be skilled in development planning.
4. I am confident in my ability to plan my career.

Reactions to the Workshop (adapted from Mathieu et al., 1992)

1. I enjoyed the content of this workshop.
2. Overall, my reaction to this workshop was very positive.
3. This workshop was a good use of my time.
4. I would recommend this workshop to others.

Career Insight (adapted from Noe et al., 1990)

1. I know specifically what my skills, values, and interests are.
2. I have a good feel for my career interests.
3. I know exactly what my interests are.

Knowledge of Individual Development Planning

1. I understand the individual development planning process.
2. I feel prepared to write my individual development plan.
3. I know how to take action on my career goals.

Career Planning (adapted from Gould, 1979)

1. I have spent a lot of time planning my career.
2. I have spent a lot of time considering my career goals.
3. I have decided what my career objectives are.
4. I have a specific plan for my career.

5. I know exactly what I need to do to reach my career goals.
6. My career objectives are very clear to me.

Seeking Developmental Activities.

1. I seek out activities to help in my career development.
2. I look for job assignments to assist me in reaching my career goals.
3. I actively seek developmental activities which support my career goals.
4. I spend a lot of time on developmental activities in support of my career goals.
5. I am dedicated to my individual development plan.

APPENDIX D

MEANS, STANDARD DEVIATIONS, ALPHAS AND INTERCORRELATIONS AMONG STUDY VARIABLES.

#	Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	PRE-INS	3.68	.69	(.83)															
2.	PRE-IDP	2.81	.62	.41***	(.74)														
3.	PRE-CP	2.87	.68	.44***	.58***	(.88)													
4.	PRE-DA	3.36	.64	.32***	.43***	.60***	(.83)												
5.	MTL	4.05	.58	.17**	.07	.06	.22***	(.86)											
6.	INSEC	3.16	.94	-.10	-.18**	-.06	-.07	.04	(.91)										
7.	SUP	3.30	.88	.07	.20**	.09	.23***	-.02	-.21***	(.95)									
8.	JOBINV	3.00	.70	.12	.11	.18**	.29***	.11	.04	.15*	(.80)								
9.	LOCUS	3.71	.39	.29***	.08	.22**	.24**	.34***	-.09	-.02	.15*	(.60)							
10.	POST-INS	4.04	.52	.46***	.28***	.36***	.23***	.24***	.00	.05	.19**	.24**	(.78)						
11.	POST-IDP	4.00	.47	.27***	.17**	.21**	.21**	.19**	.02	.09	.21**	.18*	.56***	(.73)					
12.	POST-CP	3.41	.79	.19	.21	.42**	.33*	.14	.12	.04	.18	.17	.24	.55***	(.92)				
13.	POST-DA	3.52	.80	.21	.21	.18	.32	.12	.08	.04	.25	.13	.12	.42*	.79***	(.91)			
14.	MTT	4.31	.48	.12	.07	.02	.17**	.40***	.13*	.02	.16*	.21**	.39***	.51***	.22	.30	(.86)		
15.	EFF	3.78	.54	.27***	.28***	.33***	.32***	.31***	.01	.11	.21**	.31***	.57***	.71***	.62***	.44**	.51***	(.81)	
16.	REAC	4.20	.58	.08	.05	.03	.12	.28***	.21***	-.03	.04	.08	.30***	.37***	.22	.11	.66***	.44***	(.91)
	Age	42.59	8.5	.10	.04	-.03	-.17*	-.15*	.08	-.18**	.02	-.08	-.22	-.09	-.33	-.35*	-.12	-.09	-.03
	Sex	1.49	.5	-.07	.03	-.06	.05	.29***	.01	.03	-.04	.01	.11	.11	.14	.07	.15*	.17**	.12
	Job Tenure	7.07	6.84	-.02	.00	-.09	-.02	-.07	-.06	-.07	-.22**	-.30***	-.10	-.13	-.27	-.28	-.07	-.20**	-.02
	Org. Tenure	14.38	7.06	-.02	-.06	-.11	-.19**	-.19**	.03	-.06	-.02	-.15	-.12	-.06	-.20	-.16	-.08	.10	-.06

Note: indicates 2-tailed significance at the p<.05 level; * p<.01 level; ** p<.001 level; alphas occupy the diagonal; decimal points have been omitted; scale anchors (1=strongly disagree; 2=disagree; 3=neutral/undecided; 4=agree; 5=strongly agree); sex (1=male; 2=female); PRE-INS refers to the pre-test of career insight; PRE-IDP refers to the pre-test of knowledge of individual development planning; PRE-CP refers to the pre-test of career planning; PRE-DA refers to the pre-test of seeking developmental activities; MTL refers to motivation to learn; INSEC refers to job insecurity; SUP refers to supervisor support; JOBINV refers to job involvement; LOCUS refers to locus of control; POST-INS refers to the post-test of career insight; POST-IDP refers to the post-test of knowledge of individual development planning; POST-CP refers to the post-

VITA

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