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CORPORATE CAREER DEVELOPMENT TRAINING PROGRAM--AN
EVALUATION OF PARTICIPANT BEHAVIORAL AND PERCEPTION CHANGES

presented by

Maryann Frederick Cox

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CORPORATE CAREER DEVELOPMENT TRAINING PROGRAM--AN
EVALUATION OF PARTICIPANT BEHAVIORAL AND PERCEPTION CHANGES

By

Maryann Frederick Cox

A DISSERTATION

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ABSTRACT

CORPORATE CAREER DEVELOPMENT TRAINING PROGRAM--AN EVALUATION OF PARTICIPANT BEHAVIORAL AND PERCEPTION CHANGES

By

Maryann Frederick Cox

Purpose

The purpose of the study was to determine the effects of a Career Self Management training program on behaviors exhibited and perceptions held by the program participants. Answers to the following questions were sought:

1. What career self management behavior changes occurred for program participants?
2. What career self management perception changes occurred for program participants?

Procedures

A questionnaire was developed, piloted, and administered to one hundred Career Self Management program participants and one hundred non-participants. The following statistical procedures were utilized to analyze the data: frequency comparisons; correlation coefficient; multi-variant step-wise linear regression; percentiles; and the chi-square test.

1. The first step in the process of the
formation of the new state is the
establishment of a new government.

2. The second step is the establishment of a
new constitution.

3. The third step is the establishment of a
new legal system.

4. The fourth step is the establishment of a
new judicial system.

5. The fifth step is the establishment of a
new executive system.

6. The sixth step is the establishment of a
new legislative system.

7. The seventh step is the establishment of a
new administrative system.

8. The eighth step is the establishment of a
new financial system.

9. The ninth step is the establishment of a
new social system.

10. The tenth step is the establishment of a
new cultural system.

11. The eleventh step is the establishment of a
new educational system.

12. The twelfth step is the establishment of a
new health system.

13. The thirteenth step is the establishment of a
new sports system.

Findings

1. Sixty-five percent of the areas researched through the use of the Career Self Management Questionnaire were significantly impacted, indicating significant behavior and perception changes, as measured by the statistical analyses.

2. There were significant differences between the responses of the experimental group to questions on the pre-test, post-test, and post-post test within the following areas: development of career goals; assignment of self responsibility for one's career; assessment of strengths and weaknesses; assessment of life purpose; importance of analyzing work values; assessment of values and ideals; awareness that life is "always changing;" comfortableness in handling personal and career changes; gathering of information for furthering career growth; realization that all parts of life are interdependent; use of learning style; use of visualization; and investigation of career opportunities within the company.

3. There were significant differences between responses of the experimental group and responses of the control group within the following areas: development of career goals; assignment of self responsibility for career; assessment of strengths and weaknesses; assessment of life purpose; assessment of values and ideals; awareness that life is

"always changing;" gathering information for furthering
career growth; use of learning style; use of visualization;
and investigation of career opportunities within the company.

DEDICATION

This is dedicated to my father, who once told me that I could accomplish anything I wanted to accomplish; to my mother (posthumously), who through the years encouraged me to achieve and who delighted so in the accomplishments of her children; and to my children, Kelly and Steve, who demonstrated their independence and supported me with their love, understanding, and admiration.

I dedicate this to you.

ACKNOWLEDGMENTS

The number of individuals who have influenced, supported, or encouraged me in this effort are numerous.

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Without the support and assistance of the Dow Corning

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Much appreciation goes to Dan Bourrie, research and statistics consultant, whose expertise proved invaluable to the completion of this project. Through his diligence, untiring efforts, and patience, the statistical analyses for this dissertation were completed.

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I wish to express appreciation to Dr. Ron Kyhos for his meticulous editing of the dissertation and his thoughtful suggestions. Special thanks also go to long-term friends, Lou Person and Patti Tuma, who reviewed the final copy and offered important comments.

No publication represents the work of the writer alone. Many people contribute to the final product, and this dissertation is no exception.

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CHAPTER I

THE STUDY

Introduction

Corporate cultures have become increasingly preoccupied with productivity, the measure of individual or organizational ability to produce quality goods and services effectively at the lowest possible cost. Deming (1982) related that rapid technological change and the need to achieve better return on investment constitute major challenges. Although many concepts and techniques exist to deal with these dual challenges, he felt that the innovations derived through application of the concepts and techniques eventually must be rendered to the work force who, directly or indirectly, produce the goods and provide the services. The necessary link is training. Such a great reliance on training places a large responsibility on the training function to be accountable for its effectiveness. Deming concluded that training requires systematic evaluation, assessment, and feedback to generate improved performance.

One way that organizations have made efforts to keep performance levels high is by establishing career paths for

their employees. However, often the employees are moved along those paths without the proper individual assessment or the necessary training. Glitzer and Maher (1982) reported that now many corporate employees are participating in a relatively new phenomenon, as they systematically plan their careers under the organization's guidance. A number of organizations are moving from the traditional approach to career development, in which the organization was the primary mover behind people's careers, to a more contemporary model, in which the individual exhibits career self management. As a result, career development training programs have come into existence in which corporate employees practice self assessment, career exploration, career planning, and career and life management.

The hallmark of a plan providing a career development program is the use of evaluation to assess program results and to perhaps redesign the program for further effectiveness. Evaluations from the training program and an analysis of the program's effects, based on data collected before and after its implementation, help to identify areas for improvement, according to Bakken and Bernstein (1982).

Evaluation is an important part of any training and development effort. As well as an assessment of outcomes

or effects, evaluation is also a systematic inquiry into training contexts, needs, plans, and operations. The benefits of career development training evaluation need to be fully recognized. Brinkerhoff (1981) emphasized that with good assessments of effectiveness, career development training programs can be made more relevant and practical for both individuals and the organization.

Background of the Study

In general, the career planning and development activities practiced in a corporation can be vital contributions to the positive quality of work life of the organization. If corporate leaders are to evolve effective career development programs in their organizations, they need to correlate their perceptions of what is most beneficial for employees with an accurate gauge of employees' perceptions of needed career development activities. A portion of this feedback can be obtained from employees who participate in the corporation's career development training program.

Another consideration is the size of the organization; for as the size of an organization grows, the need for career self management, including self assessment and networking, becomes more and more urgent, since individual

qualifications become less generally known due to the increased number of people. The Dow Corning Corporation, a Fortune 500 company, met this need by developing a custom designed Career Self Management training program for company employees.

The objective of the Career Self Management program was: to provide a systematic approach for employees to examine their personal capabilities, interests, opportunities, and choices, and to identify and follow through with career growth objectives and plans. Designed within the program context, there were two basic truths underlying the Career Self Management program: (1) Everything is always changing, and (2) Everything is interdependent. Also in the development of the program three assumptions were identified: (1) The better the "match" between participants' unique needs and abilities and the career paths provided by their organization, the greater the chances for satisfaction and a productive relationship, (2) Participants must continue to grow in order to feel satisfied and to maintain productivity in their career, and (3) Analyzing the "match" and planning for growth are the purposes of the program.

The program was taught, within a two-day format, to training groups consisting of 15-25 participants. Most of

the programs were taught by the researcher who is an outside consultant for the Dow Corning Corporation. All of the programs were given at an off-site location, rather than in the corporate training facility.

The study consisted of surveying, through the use of a research questionnaire, 106 program participants (experimental group) and 122 employees who did not participate in the Career Self Management program (control group). The experimental group completed the questionnaire immediately before the training program, immediately after the program, and approximately four months after the completion of the training program. The control group, selected from the populations of other Dow Corning training programs, completed two questionnaires, with a four-month interval between them.

The intent of Dow Corning Corporation and the researcher was to determine what, if any, career self management behavior changes and perception changes occurred for program participants and how the behaviors and perceptions of the experimental and control groups compared.

Rationale for the Study

The development and implementation of the Career Self Management program at Dow Corning Corporation stimulated

positive responses from the program participants and, in some cases, from their supervisors and managers. Primarily, the program was viewed as a vehicle for meeting an existing need of the company and its employees. Although these positive reactions were gratifying, many more specific questions were unanswered. No prior data had been collected regarding the application of the Career Self Management program; no data had been recorded in terms of behavior or perception changes. Neither was there information as to any behavior or perception changes correlating with the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status of program participants.

Training represents a significant expenditure of funds from an organization and the evaluative procedures within this study were to help justify such expenditures. The study also provided a more thorough examination of the program's overall educational value to its participants.

A review of the literature revealed that no other studies had been completed to assess the effectiveness of a corporate career development training program. Although evaluation results cannot be borrowed, evaluation techniques can be replicated. It is the hope of the researcher that

this study will serve as ground work for more research to be completed in the same area.

Because of the fact that the Career Self Management program was custom designed for Dow Corning employees, this assures the study's uniqueness.

Purpose of the Study

The purpose of the study was to determine the effects of a Career Self Management training program on the perceived career self management behaviors and perceptions of the program participants. Answers to the following questions were sought:

1. What career self management behavior changes occurred for program participants?
2. What career self management perception changes occurred for program participants?

Statement of the Problem

The major problem of this study was to assess the effectiveness of the Career Self Management training program provided within the Dow Corning Corporation and to determine what behavior changes and perception changes occurred for program participants. There was an analysis of data collected from participants in the Career Self Management

program and an analysis of data collected from an equal number of training program non-participants. The data collected were in respect to behaviors and perceptions regarding career self management.

Procedures

The major dimensions of the study included:

1. Securing permission from the Manager of Personnel and the Manager of Education and Training, Dow Corning Corporation, to survey the program participants and non-participants involved in the study.
2. The construction of the research questionnaire composed of questions relating to the career self management behaviors and perceptions.
3. Administering the questionnaire to a pilot group and using the group's feedback for necessary modification of the questionnaire.
4. Administration of the questionnaire to the Career Self Management program participants. The questionnaire was administered to this group immediately before the training program, immediately upon completion of the program, and approximately four months later by mail.

5. Administration of the questionnaire to the program non-participants. The questionnaire was administered to this group, which was selected from participants of other Dow Corning training programs, during the training program from which they were selected. A second questionnaire was administered four months later by mail.
6. Tabulation and coding of data in preparation for statistical analysis.
7. Application of the following statistical procedures: frequency comparisons; correlation coefficient; multi-variant step-wise linear regression; percentiles, which generated the mean, standard deviation, skewness and kurtosis, and the median for each independent and dependent variable; and the chi-square test.
8. Development of conclusions and recommendations in regard to Dow Corning's Career Self Management training program, corporate career development programs in general, and the evaluation of such programs.

Limitations of the Study

The limitations inherent in the study were:

1. Program participants voluntarily registered for the Career Self Management program.
2. Program non-participants were selected without the use of a random selection method.
3. The program participants were at various Hay point levels, from various organizational functions, and of both exempt and non-exempt status.
4. The researcher had no control of the placement of participants in the Career Self Management programs.
5. Program participants completed the research questionnaire while in the training room among peers and in the presence of the researcher.
6. The researcher was the training instructor for the Career Self Management program.
7. No attempt was made by the researcher to individually interview the groups involved in the study.

Statement of the Null Hypotheses

In completing the research study, the following null hypotheses were tested by the researcher:

1. There will be no significant differences between the responses of the experimental group to questions on the pre-test, post-test, and post-post test, as

indicated by both correlation coefficient values of less than .70 or more than $-.70$ and the chi-square test at the .05 level of confidence.

2. There will be no significant differences between the responses of the control group to questions on the pre-test and post-test, as indicated by both correlation coefficient values of less than .70 or more than $-.70$ and the chi-square test at the .05 level of confidence.
3. There will be no significant differences between responses of the experimental group and responses of the control group with respect to career self management behavior changes and perception changes, as measured by the Career Self Management Questionnaire. Statistical differences will be indicated by both correlation coefficient values of less than .70 or more than $-.70$ and the chi-square test at the .05 level of confidence.
4. There will be no significant differences of the responses on each set of Career Self Management Questionnaires with the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status, as measured by both

correlation coefficient values of less than .70 and more than $-.70$ and the chi-square test at the .05 level of confidence.

Definition of Terms

In order to clarify the nature of this study, the following terms are defined:

Behavior Change	A difference in the actions or activities of a person, as indicated by that person.
Career Development	A life-long process which includes gathering and assessing information on work experiences, skills, personal traits, interests, and uniqueness in order to choose career situations that are satisfying and productive.
Career Self Management	Dow Corning Corporation's name for an employee career development program.
Control Group	The group involved in the study who were program non-participants.
Exempt Status	Classification of an employee who is not eligible to receive overtime compensation.
Experimental Group	The group involved in the study who were program participants.
Hay Points	Designated measures formulated as criteria for job level and salary determination.
Non-Exempt Status	Classification of an employee who is eligible to receive overtime compensation.

Non-Participant	An individual involved in the study who did not participate in the Career Self Management program.
Organizational Functions	Divisions or departments within the Dow Corning Corporation, depicting various types of jobs and job activities.
Paired Sets of Questionnaires	Two groups of survey instruments that are suitable for statistical comparison.
Participant	A learner actively involved in a training program.
Perception Change	A difference in the ideas, impressions, or insights held by a person, as indicated by that person.
Pre-Test (Control Group)	The first of two questionnaires administered to program non-participants.
Pre-Test (Experimental Group)	Questionnaire administered to the program participants at the beginning of the Career Self Management program.
Post-Post Test (Experimental Group)	Questionnaire administered to program participants at a time interval of four months following the Career Self Management program.
Post-Test (Control Group)	The second questionnaire administered to non-participants approximately four months after the administration of the first questionnaire.
Post-Test (Experimental Group)	Questionnaire administered to participants immediately following the Career Self Management program.
Set of Questionnaires	A particular group of research survey instruments, consisting of

either the pre-tests, post-tests, or the post-post tests for the experimental group, or the pre-tests or post-tests for the control group.

Training Program A formalized, intense learning experience of specific length, which is meant to provide immediate application of learning on the job.

Organization of the Study

In Chapter II a review of precedent literature is provided; methodology and the design of the research are presented in Chapter III; Chapter IV is an analysis of the research findings; the summary, conclusions, recommendations, and reflections are offered in Chapter V.

CHAPTER II

REVIEW OF PRECEDENT LITERATURE

Introduction

There has been a paucity of data regarding the evaluation of corporate career development training programs. This review of precedent literature will include career development in organizations, corporate career development programs, and the development and application of training evaluation.

Career Development in Organizations

In viewing career development in organizations, London (1983) outlined the components of career motivation and proposed relationships among them. The components consist of individual characteristics organized into the three domains of career identity, career insight, and career resilience, with corresponding situational characteristics, and career decisions and behaviors. The relationships among the components are based on prospective and retrospective rationality, with prospective rationality being the process by which individuals' career decisions and behaviors are affected by what they believe will happen in the future. Retrospective

rationality is based on the idea that social learning and information processing influence individual characteristics. The importance of different individual characteristics will change with the salience of corresponding elements of the situation and one's decisions and behaviors. Testing the model provides results that are likely to be valuable for designing new motivational strategies, London concluded.

Danforth and Alden (1983) advocated that organizations need a career development concept that alleviates the increasing pressure of first-level and middle managers who are competing for limited numbers of jobs, yet that ensures that qualified personnel are identified and groomed for top management. Because of the volume of well-trained, expectant professionals waiting for management slots, the increased technical nature of business, and the growing recognition and acceptance of the job/person fit concept, they proposed dual career ladders that legitimize career stages for both managers and technical professionals, suggesting a career ladder for each one of these two groups. In conjunction with their dual career track approach, they incorporated the four career stages of: learner, doer, manager, and mentor. Essentially, they stated, this concept holds that there are normal progressions through these ascending stages, with

required transitions and changes in job structure to accompany the individual's unfolding career needs. After five to seven years within an organization, an assessment of the person's long-range aptitude and interests in either technical specialties or generalized management is made. Based on the assessment, an individual employee begins in-depth development.

The authors justified that with the implementation of a dual-career ladder, an organization will be better equipped to define the performance that it expects from both professionals and managers. For those on the professional track, it will create opportunities to be rewarded for professional achievement in ways that the single-career ladder has always provided for managers, allowing for both groups a better match between a person's strengths and capabilities and the company's needs.

Speaking also to the issue of the job/person fit within organizations, Walker (1978) explored the risks and benefits of career development, finding that many executives support career planning and development as a worthwhile concept but fear such a formal program would raise employee expectations and anxieties, increase turnover, burden supervisors, and imply an unrealistic management commitment to career

development. Rather than viewing career planning as a risk, Walker described it as a benefit that results in better matching of individuals and jobs and improved utilization of capabilities. His research indicated that some companies have initiated career planning programs to reduce turnover, improve the quality of working life, help minimize the chance of white collar unionization, and improve on-the-job performance. Other companies have adopted career planning programs to specifically focus on "achievement motivation training" and to help those employees with career expectations that were too low. Walker continued that career planning should help employees come to grips with what they want out of their working lives and translate these wants into realistic action plans that get results with the support of company resources.

The key to effective career planning appears to be in developing more realistic--not raised--career expectations. Companies that have been successful in their career planning efforts have guided employees toward opportunities and resources that are actually available. (p. 3)

Career planning should not disrupt the functioning of the organization, Walker concluded, but rather, it should be another way to make personal career plans fit into the company's organizational plans, needs, and ways of doing

business.

Sikula and McKenna (1983) related that the basic problem the career development process in organizations must face is the effective and continuous matching of the needs and expectations of the employer with the needs and expectations of the employee. The emphasis on career development implies that as the organization transcends time and alters its goals and missions, certain human resource qualities will be demanded and others will become obsolete. They recognized that for the organization to be certain that the specific skills and knowledge it requires be present, it must address the issue of career management and development. The organization must also realize that to do less is to create an ineffective and inefficient linkage between itself and its personnel.

Sikula and McKenna presented yet another perspective with regards to career development in organizations. With increased worker mobility becoming the norm in many professional fields, the position of the organization with regard to contemporary career development changes. They proposed that as long as the relationship between the individual and the employer is viewed by both entities as being increasingly temporary, the organization is less powerful in providing the traditional career guidance it once might have

achieved. The individual now has the responsibility for career management. As social and institutional norms regarding permanent work organization linkages have changed, so too has the ultimate responsibility for career development.

Effective career management should no longer be viewed as the responsibility of the personnel department; rather, individuals now must assume authority and responsibility for their own careers as they chart out career paths on an inter-organizational basis. What complicates this problem further is the reality that only a few individuals are both technically prepared and willing to handle this new assignment. (p. 90)

Sikula and McKenna concluded that given social and institutional trends, the burden for career development can no longer be placed in the hands of the employing organization. Rather it will continue to be more and more beneficial for the individual to assume responsibility. The implications of the shift will place additional emphasis on the need for individuals to understand the criteria and processes of career decision making.

As social norms and trends change with regard to employment expectations, both the individual and the organization must remain sensitive to these environmental shifts. Additionally, these changes must be reflected in both personal and organizational strategies for effectively linking people to organizations. The concept of career self-management is a personal and organizational employment philosophy which matches employer and employee and job and career expectations. (p. 97)

The concept of individuals managing their own career planning is also addressed by Wilhelm (1983). He expressed that people want personal freedom, opportunities for growth and development, and a chance to make their own choices and commitments. They are, therefore, less willing to leave the management of their careers solely up to their employers. Increasingly, they are demanding an active part in the planning of their professional development.

Accurate self-assessment requires that one collect enormous amounts of data for analysis and interpretation, a process that takes considerable time, effort, and inspiration. Like a physical fitness regime, it is a task that's often better accomplished in a group setting--where momentum and motivation can be shared and maintained. Because taking stock of oneself is extremely personal and demanding, a workshop setting is essential. Furthermore, having a person independent of the company in charge can relieve some of the participants' anxiety because the process seems less threatening. (p. 85)

Wilhelm adhered to the idea that employees who have thought about what they want from their careers and who have been given a chance to express those aspirations are less likely to leave. With a realistic understanding and appreciation of what the company can offer them and with a sense of how their goals fit with those of their employer, they are often more content to stay. Where immediate advancement is not possible, employees may accept a lateral promotion in

which they are given two to three years for exposure to a new idea. In this way, the company is able to retain valued workers while it awaits the opening of more suitable positions.

Wilhelm concluded that perhaps the most persuasive reason for career self management training is the need to remain competitive. Those companies that recognize the need to provide employees with satisfying opportunities will have the decided advantage of a loyal and industrious work force.

Companies willing to engage in comprehensive career self-management training wind up with more purposeful, self-assured, productive employees. Instead of bringing on increased turnover, such efforts can boost companies' stability. The need for more and better employee career management is clear. Companies experienced with the process have learned that career self-management can be highly successful as a motivator of today's changing work force. (p. 89)

Zenger (1981) agreed that employees should take full responsibility for their own careers, determining their own abilities, interests, strengths, and desires for work. Following that, he focused on becoming acquainted with the organization and the opportunities that exist within it by developing an information network. He discussed the importance of looking for a broad career growth experience, exploring job enrichment or additional job responsibilities, rather than seeking only the next promotion. Zenger further

encouraged aggressively pursuing career opportunities as they become available within the organization.

Leibowitz and Scholssberg (1982) addressed the issue of career transitions within organizations and the implications that, therefore, exist for designing a new set of career services within the organization's career development framework.

These authors, like those previously noted, expressed their belief that a balanced career development program may put the major responsibility on employees for their own careers; however, organizations must be responsible for providing conditions in which employees can exercise self-responsibility, they said.

According to Leibowitz and Scholssberg, critical career transitions are events that necessitate a change in the individual's assumptive world or that necessitate changes in the individual's relationships. Falling into this category are moves into new jobs or advancements, lateral moves, job losses, and non-occurrences, which describe situations where employees have reached transition points because of their non-movement. The model they proposed emphasized working with homogeneous groups in which all participants face the same type of transition and offering them support systems,

cognitive information on the issues and feelings associated with their specific situation, and planning strategies.

Review of the literature indicated that networking, and particularly, mentoring is a key element in the career patterns of successful employees, especially those who initiate self responsibility and self management in planning their lives and careers. Missirian's (1980) research revealed three characteristic elements which distinguish mentoring relationships as the highest point on a continuum of supportive relationships. The three elements are: the degree of power the mentor commands in terms of access to resources, both material and personal; the level of identification with the mentor; and the intensity of emotional involvement with the mentor. Missirian supported the idea that mentoring relationships, although unique and complex, can be approximated, if not fully reached, at all levels of the organization. Conclusions drawn from Barnier's (1981) study coincide with Missirian's evidence, as Barnier concludes that mentoring, or at least supportive relationships, are beneficial, if not necessary, to the career development of individuals within the career development framework of organizations.

Corporate Career Development Programs

Many organizations are taking greater interest in helping employees analyze their abilities and interests through the implementation of career planning activities and corporate career development programs. LaVan, Mathys, and Drehmer (1983) identified three reasons for corporations to institute career development programs. The reasons are: increased government involvement and intervention in employee/employer relations; increased employee stress; and technological advances and innovations within organizations. The authors contended that career development programs coupled with personal counseling programs are needed to assist employees in coping with the stresses of organizational change, job pressures, and work-related problems.

LaVan, Mathys, and Drehmer advocated that great strides can be made in employee development by training supervisors in basic skills such as employee counseling and coaching, listening, performance appraisal and feedback, mutual goal setting, and job redesign. This training, they felt, would enable the supervisors to more effectively provide career development assistance to their employees. For this to occur and for the career development programs to be more widely accepted, greater line management involvement in the design

and implementation of programs seems warranted, they contended.

In view of the relatively low educational requirements for the professional counseling staff and lack of training provided to supervisors involved in counseling, there appears to be a need for more training. If measures of effectiveness were developed, they could be useful in determining the nature and extent of any additional training required for the provider of counseling. (p. 146)

"To be effective," declared Kaye (1981), "career development programs in organizations must be linked to other human resource activities that are already in place." (p. 36) Kaye viewed that the most important task of the career development practitioner initiating a comprehensive process is to conceptualize the career development program as a logical, step-by-step framework and to determine how human resource development efforts can be supported by and supportive of each step. She defined a complete career development process as a cycle that moves sequentially through the six stages of: preparation, profiling, targeting, strategizing, execution, and integration. The six-stage career development provides an integrative element within career development programs and encourages employees to be proactive.

Kaye also supported the idea that supervisors play an important role in their employees' career development. They

must be willing and able to act as the program participant's first contact for career development questions, ideas, and reality-testing. Additionally, supervisors need to be motivated and rewarded for their contribution, and often trained in coaching as well.

For the career development program participant, the practitioner is both guide and advisor. The responsibility here is to design, manage, and implement interventions that stimulate enthusiasm and learning. In planning such interventions, Kaye continued, the practitioner will need to strike a fine balance between providing structure for developmental activities and providing latitude for unique individual needs and career directions. In the long run, however, the major responsibility for moving onward with career development rests with each individual.

Kaye had this to say regarding the importance of career development training programs:

The concerned practitioner could respond to career development by organizing a few specialized activities, such as workshops based on the six-stage model. Clearly, workshops could present appropriate and meaningful profiling, targeting, and strategizing techniques. They could even introduce the execution stage by describing the availability of learning resources or by distributing a catalogue of courses. (p. 40)

Baird and Kram (1983) looked at the partnership of the

company and employee as it relates within the corporate career development program structure. They viewed a person's career in stages that are interdependent with his or her personal needs and the needs of the company. What one wants and needs from a job, they stated, depends on the person's career stage, jobs previously held, current position, and the direction in which one is moving within the organization. Baird and Kram concluded that individuals progress through the particular career stages of establishment, advancement, maintenance, and withdrawal; therefore, the need for career planning programs is not just at the beginning of one's career. It is an ongoing need as a person goes through each career stage with all of its continuum of changes, dilemmas and concerns.

Otte (1982) addressed the integration of career development programs into the corporate organization. He advocated that the influential person could succeed in creating successful programs through an integration of career development activities and various components within the existing organizational framework. The integrated program is more likely to be successful, but it is also more difficult to establish. Proposing changes involving other existing organizational components requires understanding how those components

function.

He continued by relating that although career development literature strongly endorses the concept of individual responsibility, if an organization fails to develop employees to fill future organizational needs (through abdicating all responsibility for development), the organization will suffer, as will individuals who find themselves with no place in it. Providing incentives and services that encourage individuals to be personally responsible benefits everyone. He discussed how there must be a vision of a career development program which is appropriate to the individual and the organization:

The vision must include broad program goals, more specific objectives, and alternate ways of developing indicators to determine if the objectives have been achieved. The broad goals can remain constant. Objectives and ways of reaching them will probably need to be modified in light of experience, and specific indicators of program success will probably need to be negotiated with various persons as the program evolves. (pp. 30-31)

Otte concluded that the program leader must be prepared to change program design, based on new data from management or employees. Career development programs can accomplish many things, but claiming too much will ensure later disappointments. The career development program leader must patiently and persistently push for change, thoroughly

understand the nature of the change that is being attempted, recognize the implications of the proposed change for existing organizational components, and be able to secure the support of key leaders in the organization at all levels.

In conjunction with the same line of thinking, Gillespie (1983), after researching the role of the corporate educator in career development, found that although corporate educators play a strategic role in developing the instructional component of the career development program, their more encompassing role is to facilitate career development as an educative process that undergirds the sustained productivity and profitability of the corporation.

Increased effectiveness of program implementation is an issue addressed by Hanson (1981). Program objectives and related responsibilities need to be expressed explicitly to avoid false perceptions that lead to false expectations. Most employers agree that organizations and individuals alike benefit when employees build skills and competencies that are aligned with organizational needs. This philosophy needs to be well articulated. Attention needs to be given to the involvement and self esteem of management so that they completely understand their role within the career development program--their responsibilities before program

inception, responsibilities during the program, and any necessary follow-up procedures. Administrative detail and procedure is also something that cannot be overlooked, for when it is, program image suffers needlessly.

Development and Application of Training Evaluation

Successful training must meet specific objectives. Yet this fact has seldom received the practical attention it deserves. Typically trainers respond to management's request for help by implementing training programs, and the success of these programs is determined by looking at the reactions of the trainees or by looking at a report stating the number of hours of class, the number of trainees, or the number of classes or topics. Michalak and Yager (1979) related this as they also stated valid reasons for evaluating training programs:

The primary reason for evaluation is to see if the training program has accomplished its assigned objectives; that is, to see if the problem that was identified in the first place has disappeared after the training. (p. 130)

Another reason for evaluating training programs is to identify the strengths and weaknesses of the training activity. The training department ought to be viewed as a contributor to the bottom line. An evaluation can help to determine the contribution of the training process. (p. 130)

Training programs should be evaluated in order that management can determine the cost/value ratio of the training program. By focusing on the costs of the training in terms of time allowed employees off the job and also out-of-pocket expenses spent on the training, and the alternate potential of these expenses, an organization can determine the cost/value ratio of the program. (p. 130)

Finally, training programs should be evaluated so that trainers can establish a data base that they can use to demonstrate the productivity of their department. (p. 131)

Evaluation can take many approaches. Each of them can be helpful as long as the objectives and limitations are understood. Kirkpatrick (1971) divided evaluation into four separate but related steps: (1) reaction, (2) learning, (3) behavior change, and (4) results. He stated step one, reaction, measures participants' immediate reaction to the training and that it should be done on a regular and systematic basis. It is the beginning point of evaluation, though he pointed out that all the steps can make a contribution in determining the effectiveness of a training program. Steps two through four (learning, behavior change, and results) should follow in sequence as knowledge, time, and money permit. Learning measures skills or knowledges acquired; behavior change refers to the different action or performance exhibited by a trainee; and results are measured in a quantifiable method such as monetary results or a

measurement of reduction in absenteeism or turnover.

Coinciding with Kirkpatrick's four techniques, Brethower and Rummler (1979) address the four levels of evaluation with four corresponding questions: (1) Do trainees like the training? (2) Do trainees learn from the training? (3) Do trainees use what they learn? (4) Does the organization benefit from the newly learned performance? (p. 16) They stressed the importance of the evaluator realizing that training evaluation will probably not be as obvious as laboratory research. They recommend initially obtaining information from a small pilot group for the achievement of greater control and for obtaining more effectively the necessary detailed information. Training evaluation, they stated, should be conducted in the simplest possible way, yet answer the questions that the organization needs to have answered.

In addition to Kirkpatrick's renowned model, another widely-accepted evaluation model was developed by Stufflebeam (1985) and leading educators serving on the National Study Committee on Evaluation of Phi Delta Kappa, an international society of professional educators. The model is called "CIPP," developed in reference to four basic types of evaluation used: context, input, process, and product. Stufflebeam's CIPP model and the four types of evaluation

therein are derived from the four basic types of decisions made in education: planning, structuring, implementing, and recycling.

The objective of context evaluation is to define the institutional context, to identify the target population and assess its needs, to identify opportunities for addressing the needs, to diagnose problems underlying the needs, and to judge whether proposed objectives are sufficiently responsive to the assessed needs. The objective of input evaluation is to identify and assess system capabilities, alternative program strategies, and the procedural designs for implementing the strategies, budgets, and schedules. Process evaluation identifies or predicts in process the defects in design or provides information for decisions, as well as recording and judging procedural events and activities. Product evaluation collects descriptions and judgments of outcomes and reflects them to objectives, context, input, and process information, interpreting their worth and merit.

Determining what methods will be used to measure the final effects of a corporate career development program is contingent on: the size and sophistication of the organization; the number, nature, and accessibility of participants; and the nature of the job the participants need to perform.

Cornwell (1980) offered three basic questions to be asked regardless of the differences in evaluation techniques:

(1) How accurately did the training program address the exact requirements of the job? (2) How successfully are the participants performing each activity learned in the training program? and, (3) What consequences have occurred other than those intended? (pp. 34-36) The first two questions are answered through the use of well-designed questionnaires to participants and supervisors, supplemented with observation, interviews, and an analysis of any available work-reporting data. The use of information from both a control group and the experimental group will be most helpful in answering the third question.

Until good research is provided, management support will be based primarily on faith and emotions, both of which can change radically. (p. 11)

This statement was made by Zenger and Hargis (1982) who discussed that in the collection of data, the three issues of rigor, relevance, and economy need to be considered. Rigor refers to the reliability, validity, and precision of measurement. Relevance connotes a link to organizational goals; and economy analyzes the trade-off between costs and benefits. The rewards from such research can be enormous, as training programs can be fine-tuned in content and

methodology; the training department gains by having a viable method for justifying its existence and for seeking ways to increase its influence and visibility; and the training specialist gains credibility within his or her organization.

Human resource managers across the country seem to reflect a common attitude about the state of affairs in training evaluation. After years of being a critical issue, and in spite of the development of a series of models and methods, the evaluation of training and development is still thought to be a nebulous topic. These ideas were expressed by Galagan (1983) who feels that training evaluation should be a management information system that will enable management to take action; it should not be merely an audit of what has taken place. She perceives evaluation as meaningful when agreement exists as to why the evaluation is taking place and when complete data collection is possible. Meeting an organizational requirement or mandate, making a go/no-go decision about a program, identifying opportunities and actions for improving a training program, selling the program, and managing the training organization are reasons she established for pursuing training evaluation.

Hartley (1973) looked at corporate training evaluation from yet another perspective. He indicated that evaluation

is not an isolated event done at the end of a training process. Pursuing evaluation means questioning not only the course objectives, but also questioning why the training was required. In order that evaluation should play its full part in the training process, people concerned with evaluative techniques should also be concerned with the initial design of the training program, the setting of objectives, the analyses involved, and the determination of appropriate teaching strategies. Evaluation is, therefore, concerned with the whole training process, not just its outcomes. Speaking to the interrelationships between course objectives, teaching methods and evaluation strategies, he reiterated that different course objectives imply different teaching strategies and different methods of learning; therefore, they demand different methods of evaluation. Another factor of importance to consider, he concluded, is the timing of the evaluation with respect to course objectives. The advantages of this type of evaluation are that decision processes are based on open evidence for inspection and the whole organization is involved in improving efficiency.

Alden (1978), Bakken and Bernstein (1982), and Clement and Aranda (1982) all had similar ideas as they expressed evaluation as an integrative force throughout the total

training process.

Alden (1978) attributed the failure of evaluation projects to influence the form and substance of training programs they are appraising to the evaluator's lack of focus. Before a meaningful evaluation project can be designed, evaluators need to know if management will even consider making a decision about whether or not to change a program or how it should be changed. They also need to determine what research questions will provide the data necessary to make the management decisions and what level of data is practical to collect and important enough for management to use in the decision-making process. Also, they must predetermine what criteria management will use to make the decision. Once these determinations are made, the evaluator should attempt to focus the research questions on the critical factors that will decide the issues--the concern with effectiveness, the concern with efficiency, and the concern with relevance.

A straight-forward, systematic approach to designing corporate training evaluation was developed by Bakken and Bernstein (1982). By identifying the decision makers who need or desire information about the effectiveness of training, and by clarifying the goals of training, the trainer or designer who employs this approach can easily determine

which observable outcomes will meet the needs of decision makers and show whether the objectives of training were achieved.

We have found this approach to evaluation helpful in organizing the diverse elements of training so that we can determine "what to measure" and can answer the question, "Was training effective?" (p. 51)

Since this approach takes into account the information needs of decision makers and the objectives of the training program, these two elements are directives to the appropriate observable outcomes among learner reactions, knowledge outcomes, job performance, and organizational and bottom line results. To be most effective, they concluded, this approach is applied before training occurs, with the evaluation strategy being determined during the developmental phase of a training program.

Clement and Aranda also felt there is a need for evaluators to be better informed, as most evaluators have placed little emphasis on important variables beyond the training course itself. Yet the success of management training may be contingent upon such variables as the organizational setting within which the manager attempts to use the training, the unique characteristics of the manager to be trained, and the nature of the organizational problem to be

solved by the training. To measure effectiveness of management training, the training professional must assess the impact of training on each of these variables. Suggested by Clement and Aranda is the use of a four dimensional approach for evaluating the organizational variables involved--the manager, the subordinate, and the organization as a whole. The four dimensions are: training results, relative effectiveness of technique, impact of individual differences, and impact of the environment. What is analyzed with the four dimensional approach includes the actual job performance impact of training, the effective use of training techniques, the receptiveness of the manager to the training, and the extent to which the new behavior matches the climate of the organization.

The aforementioned contingency framework for training evaluation offers a way for the evaluator to assess program results in an organizationally relevant way, allowing for problem-solving and improvements. It can be used by both the provider and user of training to jointly determine the training effectiveness, collaborating on what needs to be accomplished and how it should be done.

As a research guide, the format also allows the trainer to develop an evaluation design that considers the importance

of various elements of the training program.

The four-dimension contingency format to training evaluation provides a simple, relevant, research-based way to measure training. It provides a way for training to justify its existence and for the manager to justify his or her expenditure of training dollars. (p. 43)

Two methods of evaluation, formative and summative, were pointed out by Goldstein (1974). Formative evaluation is utilized to determine if the program is operating as originally planned, or if improvements are necessary before the program is implemented. Summative evaluation, on the other hand, concerns itself with the evaluation of the final product and appraisal of the program after implementation. Thus, formative evaluation stresses tryout and revision processes, using primarily process criteria, while summative evaluation uses outcome criteria to appraise the instructional program.

Mahoney, Jerdee, and Korman (1960) cited two other distinct evaluation methods: substantive and procedural. Substantive evaluation is concerned with net effects of the activity; procedural is concerned with the conformity to practice certain established standards considered essential to the achievement of desired effects. Procedural evaluation is most useful where relationships between procedures and

results have been established or where a substantive evaluation is not possible.

Three basic designs for evaluation are found in practice, they continued. The first of these focuses on the level of achievement of objectives upon completion of training activities. A second approach involves measurement both before and after training which are compared to indicate change in achievement of objectives associated with training activities. A third approach involves applications of the same measures to a control group similar in all respects to the experimental group undergoing training. Achievement of the two groups is compared to indicate changes or results specifically associated with the training.

Two authors dealt with the issue of economics as it relates to training evaluation. The ultimate goal of all employee training, stated Rose (1968), is to develop the abilities of the work force so that the functions of the organization are performed expertly and at a minimum cost. To that end, he stated, that the purposes of evaluation are to determine whether or not the objectives and the content of training courses are consistent with the mission and current needs of the organization, to determine if the objectives are being reached in the most effective and economical

way, and if not, what changes should be made.

Comprehensive evaluation, according to Rose, includes: an assessment of the plan for training, as related to well-established needs; the methods, instructional materials, and training aids used for training; and the performance and achievement of those being trained.

Lott (1977) stated that it is evident that an inducement beyond course quality enhancement is needed if evaluation is to transcend its generally superficial status, and become a highly intensive and objective exercise through education and training. By directing evaluation efforts more consciously and aggressively toward the goal of shortening courses and reducing costs, Lott believed there exists a possibility of raising the interest level of business managers, public administrators, and leaders in education and training with regard to the whole subject of course evaluation. Evaluation will emerge far more rapidly, Lott pointed out, when top management sees evidence that it can be used to reduce training costs or stretch available training dollars.

Chapter II has provided precedent literature focused on career development in organizations, corporate career development programs, and the development and application of training evaluation.

CHAPTER III

METHODOLOGY AND DESIGN OF THE RESEARCH

Introduction

The purpose of this study was to determine the effectiveness of a Career Self Management training program within the Dow Corning Corporation. A survey questionnaire to assess behavior and perception changes of the program participants and non-participants was administered for evaluating the program's effectiveness. Tested were four null hypotheses:

1. There will be no significant differences between the responses of the experimental group to questions on the pre-test, post-test, and post-post test, as indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.
2. There will be no significant differences between the responses of the control group to questions on the pre-test and post-test as indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the

.05 level of confidence.

3. There will be no significant differences between responses of the experimental group and responses of the control group with respect to career self management behavior changes and perception changes, as indicated by the Career Self Management Questionnaire. Statistical differences will be indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.
4. There will be no significant differences of the responses on each set of Career Self Management Questionnaires with the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status, as indicated by both correlation coefficient values of more than .70 and less than -.70 and the chi-square test at the .05 level of confidence.

The impetus for acquiring the data in this study originated from: (1) a need to determine the program's effectiveness, based on individuals' behavior and perception changes; (2) a need for the Dow Corning Corporation to implement an

initial evaluation process which could be used as a basis for further evaluation of other corporate training programs, and (3) the reactions of the individuals who participated in the first Career Self Management programs.

The methodology encompassed: securing permission from the Dow Corning Corporation to conduct the research; constructing the research questionnaire; administering the questionnaire to a pilot group and modifying the questionnaire accordingly; administering the questionnaire in the form of a pre-test, a post-test, and a post-post test to individuals in the experimental group; administering the questionnaire in the form of a pre-test and a post-test to individuals in the control group; tabulating and coding the data; analyzing the data and applying statistical measures; and developing conclusions and recommendations.

The Setting

The study was completed within the Dow Corning Corporation, a Fortune 500 company. Dow Corning has a comprehensive, multi-dimensional Education and Training Department. The overall objective of Dow Corning's Education and Training Department is to enhance the knowledge and skill level of Dow Corning employees so they can maximize their achievement of

personal and corporate objectives. An assessment of the corporation's educational and training needs revealed that employees needed career development guidance. As a result, the Career Self Management program was custom designed for Dow Corning employees and later implemented in April, 1984, as one of the corporation's ongoing programs offered to both exempt and non-exempt employees.

The Population

The population of the study consisted of Dow Corning employees, both male and female of various ages, with various Hay point levels, and of both exempt and non-exempt status. Individuals in the population were from the four corporate functions: Administration; Manufacturing and Engineering; Marketing and Sales; and Research, Development and Engineering Services. Data relative to the population are presented in Table 3.1.

The experimental group included 100 program participants, who completed the Career Self Management program in the last three quarters of 1984 and the first quarter of 1985. Included in the control group were 100 program non-participants who were selected to be part of the study. This selection was made while these individuals were participants in other Dow Corning training programs.

Table 3.1

Career Self Management Population Frequency Comparisons

	Experimental			Control	
	Pre	Post	Post-Post	Pre	Post
Age					
20-29	20	20	19	22	20
30-39	41	41	42	45	43
40-49	32	32	32	27	31
50-59	6	6	6	6	6
60+	1	1	1	0	0
Sex					
Male	55	55	55	65	64
Female	45	45	45	35	36
Hay Points					
134	0	0	0	9	9
166	16	16	16	0	0
196	0	0	0	10	10
233	7	7	6	2	2
276	5	5	6	4	3
340	5	5	5	8	9
435	17	17	17	13	13
510	19	19	19	15	15
600	13	13	13	17	17
702	11	11	11	13	13
824	6	6	6	8	8
994	1	1	1	1	1
Function					
(1) Admin	28	28	28	21	21
(2) M & E	31	31	31	40	40
(3) M & S	13	13	13	12	12
(4) RDES	28	28	28	27	27
Status					
Non-exempt	28	28	28	24	24
Exempt	72	72	72	76	76

- (1) Administration
 (2) Manufacturing and Engineering
 (3) Marketing and Sales
 (4) Research, Development, and Engineering Services

The Questionnaire

The research questionnaire was developed to answer the two basic questions underlying the research: (1) What career self management behavior changes occurred for program participants? and, (2) What career self management perception changes occurred for program participants?

Questions for the Career Self Management Questionnaire were developed in concert with Richard Leider (1982), designer of the Career Self Management program and co-author of the book used within the program. Leider approved the questions as being reflective of the instructional objectives of the training program and the planned outcomes. This approval focused on the content validity of the instrument, the degree to which the instrument represents the content that it is designed to measure. Borg and Gall (1973) stated that content validation is a particularly important consideration in selecting an instrument for experiments involving the effect of training methods.

A pilot study was conducted with a group of Career Self Management participants. These participants were not part of this study. Based on constructive feedback from the group, two items were deleted and the questionnaire was modified

with a different layout. Some rewording and some rephrasing were also accomplished, as per their suggestions. The final questionnaire can be found in Appendix A. A cover letter was designed for the pre-test for both groups; another one for the post-test for the control group and the post-post test for the experimental group. The cover letters can be found in Appendices B and C.

The specific objectives of the research questionnaire were to determine:

- (1) How extensively the individual had formulated his/her career goals;
- (2) How extensively the individual had formulated his/her personal life goals;
- (3) The individual's perception of the company's perception of the importance of career growth and development;
- (4) The individual's perception of the company's responsibility for handling his/her career self management;
- (5) The individual's perception of the value of a career self analysis;
- (6) How extensively the individual had assessed his/her strengths and weaknesses;
- (7) How extensively the individual had assessed his/her life purpose by looking at a combination of his/her personal

qualities, values, and life issues;

(8) The individual's perception of the importance of a work values analysis to career and life satisfaction;

(9) The extent the individual had assessed the values and ideals held to be most important within his/her life;

(10) The individual's perception of the extent to which things within his/her life are always changing;

(11) The individual's perception of comfortableness in handling changes in his/her life;

(12) The extent the individual had discussed career and self development goals and objectives with his/her immediate supervisor;

(13) The extent the individual had gathered information for helping to further his/her career growth and self development;

(14) The extent to which the individual consulted with a network of mentors, role models, and intimates in the process of making career and self development decisions;

(15) The individual's perception of interdependence of things within his/her life;

(16) How extensively the individual had attempted to keep his/her life style in balance;

(17) The extent to which the individual used his/her learning style in determining his/her most compatible career opportunities;

(18) The extent the individual used visualization when striving toward the accomplishment of a goal or objective;

(19) The extent the individual had investigated possible career opportunities within the company;

(20) The extent the individual had investigated possible career opportunities outside the company.

Data Collection

The research questionnaire, with cover letter, was administered to individuals in the experimental group at the beginning of the Career Self Management programs. The researcher gave a few brief comments regarding the purpose of the research and the confidentiality afforded to the participants in terms of their responses. Immediately following the close of the program, the same participants again completed the questionnaire. Approximately four months later, a third questionnaire, with cover letter and a stamped, self-addressed envelope to the researcher for the return of responses, was mailed. Follow-up telephone calls were made to the recipients of the questionnaire who did not initially

respond.

The research questionnaire was administered to the individuals in the control group, the Career Self Management non-participants, during the time they were trainees in other Dow Corning programs. The questionnaire had a cover letter attached; in addition, the researcher gave a brief explanation of the study's purpose and reinforced the fact that responses would be kept in confidence. A second questionnaire, cover letter, and return envelope were sent by mail approximately four months later to the individuals in the control group. Follow-up telephone calls were also made to the population of this group who made no initial response.

Data Analysis Procedures

As the questionnaires were returned, the responses were tabulated. The open-ended questions were recorded and later categorized. All other data were coded with numerical value for use with the P-STAT 8 statistical analysis and Lotus 123 software packages. The software packages were used on an IBM PC/XT to conduct the following statistical procedures:

- (1) Frequency comparisons for each set of responses on each set of questionnaires and for the demographics;

(2) Correlation coefficients for each pair of responses and for each response with all independent variables for each set of questionnaires;

(3) Correlation coefficients between all possible paired combinations of independent variables and responses for all paired combinations of sets of questionnaires;

(4) Multi-variant step-wise linear regression for the determination of significant differences based upon the timing of the questionnaire administered, the group to whom it was administered, and the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status;

(5) Percentiles, generating the mean, standard deviation, skewness, kurtosis, and the median for each independent and dependent variable;

(6) Chi-square test to determine the relative significance of differences between responses to the same questions on different sets of questionnaires.

Chapter III has presented data on the setting, the population, the development and validation of the questionnaire, the data collection, and the analysis procedures and techniques.

CHAPTER IV

THE FINDINGS

Introduction

The major purpose of this study was to assess the effectiveness of the Career Self Management training program provided within the Dow Corning Corporation. There was an analysis of data collected from 100 participants in the Career Self Management program and an analysis of data collected from 100 training program non-participants. The data were in respect to behaviors and perceptions regarding career self management. Answers to the following research questions were sought:

1. What career self management behavior changes occurred for program participants?
2. What career self management perception changes occurred for program participants?

The major dimensions of the study included:

1. Securing permission from the Manager of Personnel and the Manager of Education and Training, Dow Corning Corporation, to survey the program participants and non-participants involved in the study.

2. The construction of the research questionnaire composed of questions relating to the career self management behaviors and perceptions.
3. Administering the questionnaire to a pilot group and using the group's feedback for necessary modification of the questionnaire.
4. Administration of the questionnaire to the Career Self Management program participants. The questionnaire was administered to this group immediately before the training program, immediately upon completion of the program, and approximately four months later by mail.
5. Administration of the questionnaire to the program non-participants. The questionnaire was administered to this group, which was selected from participants of other Dow Corning training programs, during the training program from which they were selected. A second questionnaire was administered four months later by mail.
6. Tabulation and coding of data to prepare data for statistical analysis.
7. Application of the following statistical procedures:

frequency comparisons; correlation coefficient; multi-variant step-wise linear regression; percentiles, which generated the mean, standard deviation, skewness and kurtosis, and the median for each independent and dependent variable; and the chi-square test.

8. Development of implications and recommendations in regard to possible program redesign and greater overall program effectiveness.

In completing the research, the following null hypotheses were tested:

1. There will be no significant differences between the responses of the experimental group to questions on the pre-test, post-test, and post-post test, as indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.
2. There will be no significant differences between the responses of the control group to questions on the pre-test and post-test, as indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.

3. There will be no significant differences between responses of the experimental group and responses of the control group with respect to career self management behavior changes and perception changes, as measured by the Career Self Management Questionnaire. Statistical differences will be indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.
4. There will be no significant differences of the responses on each set of Career Self Management Questionnaires with the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status, as indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.

Descriptions of the statistical analyses used to test the hypotheses are as follows:

Frequency comparisons measured how frequently each response was recorded for each question within a set of questionnaires. This procedure provided the first analysis of the data and was a necessary step before applying more

sophisticated statistical techniques.

Correlation coefficients measured the degree of linear relationship between two variables which were paired. When one variable increased, the second may also have increased, resulting in a positive correlation coefficient. If the second variable decreased when the first increased this resulted in a negative correlation coefficient. The absolute value of the correlation coefficient indicated how strong a relationship existed. A correlation coefficient of 1.0 or -1.0 indicated a perfect relationship between the paired variables. A correlation coefficient of 0.0 indicated that no linear relationship existed. A correlation coefficient with a value between $-.70$ and $.70$ did not indicate a strong relationship.

Regression analysis considered the relationship of a dependent variable to one or more independent variables. The multiple step-wise linear regression procedure fit a linear equation to observed values of the dependent and independent variables by adding the independent variables one at a time and testing the significance of their inclusion in the equation. The goal of a step-wise regression was to include only the independent variables which contributed significantly to the definition of the relationship with the

dependent variable. The P-STAT procedures required a matrix of the correlation coefficients between pairs of variables. This matrix was prepared by the P-STAT correlate procedure.

Descriptive statistics summarized the values of a variable in a sample and permitted an immediate check of the surface validity of the input data. The P-STAT percentiles procedure produced values for the high, low, mean, standard deviation, skewness, kurtosis, and median for each variable. This information was used to validate the data entry step of the analyses.

The chi-square test was used to test the null hypotheses. A two way chi-square with two independent variables with two levels each was used. This procedure, when coupled with a standard table of chi-square values, provided the information necessary to determine which questions had statistically significant different responses on different sets of questionnaires.

Career Self Management Program Research Findings

Following is a listing of each of the Career Self Management questions and the corresponding research findings. The findings are based on the frequency comparison of answers as listed here for each question. (Composite frequency

comparisons for all questions can be found in Appendix D.)

Development of Career Goals

Question 1. Do you presently have any career goals? If your answer is "YES," please list one or two of your career goals here:

Table 4.1

Frequency Comparisons With Alpha Levels--Question 1

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
NO	21	8	9	17	14
YES	78	91	91	83	86
alpha of PRE EXPERIMENTAL with indicated column		*.025	*.05		
alpha of POST EXPERIMENTAL with POST-POST EXPERIMENTAL			.975		
alpha of PRE CONTROL with POST CONTROL					.50

*Significant at the .05 level of confidence

The experimental group, prior to the training program, was comparable to the control group in the response to this question with 78% and 83% of the respondents, respectively,

having career goals (see Table 4.1). Immediately after the program, 91% of the experimental group had established career goals, with the same percentage being maintained after a four-month period of time. These data indicated that at that time 9% of the experimental group had no career goals.

The data revealed a significant difference between responses on the pre-test and the post-test and a significant difference between responses on the pre-test and post-post test within the experimental group. These findings, therefore, reject Hypothesis #1. Because there were no significant differences between the responses on the pre-test and the post-test within the control group, and there were significant differences between responses on the pre-test and responses on the post-post test within the experimental group, these findings also reject Hypothesis #3.

The career goals listed by both the participants and non-participants were varied with the individuals' answers. However, the goals became more specific for the participants after completing the program.

Development of Personal Goals

Question 2. Do you presently have any personal life goals?
If your answer is "YES," please list one or two of your personal life goals here:

Table 4.2

Frequency Comparisons With Alpha Levels--Question 2

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
NO	13	7	9	12	10
YES	87	92	91	87	90
alpha of PRE EXPERIMENTAL with indicated column		.25	.25		
alpha of POST EXPERIMENTAL with POST-POST EXPERIMENTAL			.75		
alpha of PRE CONTROL with POST CONTROL					.75

Prior to the program, 87% of the participants in the experimental group had formulated personal life goals; four months later the number had increased to 91% (see Table 4.2). A comparable number of non-participants had also formulated goals, with 87% reporting goals in the pre-control group and

90% in the post-control group. These changes, however, were not statistically significant.

For both program participants and non-participants the personal life goals listed focused on the following themes: spirituality, the church, and the Christian ethic; education for themselves and their children; financial security; family life; and personal happiness. After completion of the program, participants generally expressed their personal life goals more specifically.

Perception of Company's Importance Placed on Career Growth

Statistically, there were no significant differences revealed in the responses within either the experimental group or the control group as to the extent they believed the company considered career growth and development to be important (see Table 4.3). However, there were five more respondents who, immediately after the program, felt that the company considered career growth and self development to be important to a "great extent" or a "very great extent." The number of responses from the experimental group for the same answer categories decreased by nine after a four-month period of time.

Perception of Company's Importance Placed on Career Growth

Question 3. To what extent do you believe the company considers your career growth and self development to be important?

Table 4.3

Frequency Comparisons With Alpha Levels--Question 3

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	2	3	3	7	5
GREAT	30	34	25	38	33
SOME	50	50	55	45	48
LITTLE	10	11	10	7	7
VERY LITTLE	6	2	5	3	5
NONE	1	0	2	0	2

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

.50 .50

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.10

alpha of PRE
CONTROL with
POST CONTROL

.25

Assignment of Self Responsibility for Career

Question 4. Which of the following represents how you feel the responsibility for your career should be divided between the company and you?

Table 4.4

Frequency Comparisons With Alpha Levels--Question 4

COMPANY	YOU	EXPERIMENTAL			CONTROL	
		PRE	POST	POST-POST	PRE	POST
100%	0%	0	0	0	0	0
80%	20%	2	5	1	4	2
60%	40%	8	7	3	16	11
50%	50%	35	17	31	39	45
40%	60%	26	25	31	23	23
20%	80%	25	36	41	18	17
0%	100%	4	9	3	0	2

for "YOU" greater than or equal to 80%

alpha of PRE
EXPERIMENTAL
with indicated
column

*.01 *.025

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.25

alpha of PRE
CONTROL with
POST CONTROL

.95

*Significant at the .05 level of confidence

After the Career Self Management training program, the participants indicated they assumed more responsibility for their careers (see Table 4.4). Prior to the program, 29% of the experimental group respondents assigned self responsibility for their career at 80% or more. After participation in the program, 45% answered in this way. The change in attitude was not temporary, as post-post test responses four months later indicated that 44% of the participants still felt that the self responsibility was at 80% or more. The control group's responses remained somewhat consistent with time, as 18% and 19% of the control group answered in this manner on the pre-test and post-test respectively.

The data revealed a significant difference between responses on the pre-test and post-test within the experimental group. There was also a significant difference between responses on the pre-test and the post-post test of the experimental group participants. These findings reject, therefore, Hypothesis #1. Hypothesis #3 is also rejected with the significant difference existing between the pre-test and post-post test responses within the experimental group and no significant differences existing between the pre-test and post-test responses of the control group.

Perception of Value in Analyzing One's Career

Question 5. To what extent do you believe there is value in analyzing your career?

Table 4.5

Frequency Comparisons With Alpha Levels--Question 5

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	38	41	43	33	29
GREAT	48	46	45	42	44
SOME	13	12	9	21	23
LITTLE	0	1	2	2	4
VERY LITTLE	0	0	1	0	0
NOT AT ALL	0	0	0	0	0

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

.75 .975

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.995

alpha of PRE
CONTROL with
POST CONTROL

.50

The experimental group was more involved in career analysis than the control group, as evidenced by the 86% to 88% range of participants in the experimental group

who answered "very great extent" or "great extent" during the four-month period, versus the 73% to 75% range of control group respondents answering the same way during the same time period (see Table 4.5). These findings were consistent with the fact that the experimental group volunteered to participate in the training program. Differences in responses to this question, however, are not statistically significant.

Assessment of Strengths and Weaknesses

Prior to the training program, 75% of the experimental group indicated they had assessed their strengths and weaknesses (see Table 4.6). The number increased to 93% and 90% respectively for the responses to the post-test and post-post test. Within the control group, the numbers remained fairly stable.

There was a significant difference between responses on the experimental group's pre-test and post-test, as well as a significant difference between responses on the pre-test and post-post test. Therefore, these data reject Hypothesis #1. Because there was no significant difference between the pre-test and post-test responses within the control group and a significant difference did exist between the responses of the pre-test and post-post test of the experimental group,

Hypothesis #3 is also rejected by these data.

The strengths and weaknesses listed varied widely within both the experimental and control groups. After completion of the Career Self Management program, participants generally were able to list a greater number of their strengths and weaknesses, however.

Assessment of Strengths and Weaknesses

Question 6. Have you recently assessed your own strengths and weaknesses? If your answer is "YES," please list one or two of your strengths and one or two of your weaknesses here:

Table 4.6

Frequency Comparisons With Alpha Levels--Question 6

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
NO	24	7	9	23	27
YES	75	93	90	77	72
alpha of PRE EXPERIMENTAL with indicated column		*.005	*.01		
alpha of POST EXPERIMENTAL with POST-POST EXPERIMENTAL			.90		
alpha of PRE CONTROL with POST CONTROL					.50

*Significant at the .05 level of confidence

Assessment of Life Purpose

Question 7. To what extent have you assessed your life purpose by looking at a combination of your personal qualities and your values?

Table 4.7

Frequency Comparisons With Alpha Levels--Question 7

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	4	14	10	6	7
GREAT	18	37	43	27	25
SOME	53	42	37	48	49
LITTLE	13	5	9	13	11
VERY LITTLE	8	2	0	4	4
NONE	4	0	0	2	4

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

*.005

*.005

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.90

alpha of PRE
CONTROL with
POST CONTROL

.95

for LITTLE, VERY LITTLE, and NONE

alpha of PRE
EXPERIMENTAL
with indicated
column

*.005

*.005

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.75

alpha of PRE
CONTROL with
POST CONTROL

.75

*Significant at the .05 level of confidence

There was an increase of the "great" and "very great" responses from 22% prior to the program to 51% immediately after the program (see Table 4.7). The same responses four months later remained near the post-program level at 53%. Conversely, prior to the program, 25% of the respondents in the experimental group replied with answers less than or equal to "little." This number decreased to 7% post-program and 9% after the four-month period of time.

The data revealed a significant difference between responses on both the pre-test and post-test and the pre-test and post-post test within the experimental group. These findings reject Hypothesis #1. With a significant difference existing between pre-test and post-post test responses within the experimental group and no significant differences existing between the pre-test and post-test responses within the control group, these findings also reject Hypothesis #3.

Importance of Analyzing Work Values

Responses to Question 8 revealed a temporary change (see Table 4.8). Seventy-five percent of the experimental group, prior to the program, indicated they felt to a "great extent" or a "very great extent" that it was important to analyze work values. Post program the number increased to 89%. After the four-month time period, however, there was a decrease to 74%. No significant changes occurred within the

Importance of Analyzing Work Values

Question 8. To what extent do you feel that it is important to analyze your work values in order to have career and life satisfaction?

Table 4.8

Frequency Comparisons With Alpha Levels--Question 8

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	20	30	19	18	17
GREAT	55	59	55	54	55
SOME	25	11	26	26	25
LITTLE	0	0	0	1	0
VERY LITTLE	0	0	0	1	2
NONE	0	0	0	0	0

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

*.025 .995

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

*.025

alpha of PRE
CONTROL with
POST CONTROL

.95

*Significant at the .05 level of confidence

control group.

There was a significant difference between responses on both the experimental group's pre-test and post-test and the group's post-test and post-post test. There was no significant difference between the pre-test and the post-post test of the experimental group or between the pre-test and post-test of the control group. With these findings, Hypothesis #1 is rejected.

Assessment of Values and Ideals

Post-program level of participants who had assessed their values and ideals was 88%, as compared to the 53% who indicated they had done the assessment prior to the program (see Table 4.9). The post-program level remained somewhat stable, with a slight decrease to 85% after a four-month period of time.

There is a significant difference between responses on both the pre-test and post-test and the pre-test and post-post test within the experimental group. These findings reject Hypothesis #1. With a significant difference existing between the pre-test and the post-post test within the experimental group and no significant difference evident between the control group's pre-test and post-test responses, findings here also reject Hypothesis #3.

For both program participants and non-participants the

values and ideals listed focused on the following themes:
the family; the Christian ethic, the church, and Christian
living; and economic security.

Assessment of Values and Ideals

Question 9. Have you recently assessed the values and ideals
you hold to be most important within your life? If your an-
swer is "YES," please list here some of those values and
ideals:

Table 4.9

Frequency Comparisons With Alpha Levels--Question 9

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
NO	46	12	15	39	37
YES	53	88	85	60	63
alpha of PRE EXPERIMENTAL with indicated column		*.005	*.005		
alpha of POST EXPERIMENTAL with POST-POST EXPERIMENTAL			.50		
alpha of PRE CONTROL with POST CONTROL					.75

*Significant at the .05 level of confidence

Awareness that Life is "Always Changing"

Prior to the program, 53% of the respondents in the experimental group indicated that to a "great extent" or a "very great extent" they felt their life was "always changing" (see Table 4.10). Seventy-six percent of post-program responses were in these categories; four months later there was a decrease to 64%. The number responding to "little" or "very little" decreased from 12% pre-program to 2% for both the post-test and post-post test. Any changes over time within the control group were very slight.

The data revealed a significant difference between responses on the pre-test and post-test of the experimental group, in regard to "great" and "very great" responses. There was also a significant difference between responses on both the pre-test and post-test and the pre-test and post-post test when statistically analyzing the responses of "little" or less than "little." There was no significant difference between the pre-test and post-test of the control group. These findings, therefore, reject Hypotheses #1 and #3.

Comfortableness in Handling Personal and Career Changes

Thirty-six percent of the program participants who, prior to the program, felt comfortable to a "great extent" or a "very great extent" about handling personal and career changes increased to 57% immediately after the program

Awareness that Life is "Always Changing"

Question 10. To what extent do you feel that your life is
 "always changing?"

Table 4.10

Frequency Comparisons With Alpha Levels--Question 10

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	17	22	20	11	4
GREAT	36	54	44	44	49
SOME	35	22	34	36	40
LITTLE	6	1	1	6	3
VERY LITTLE	6	1	1	3	3
NOT	0	0	0	0	1

for GREAT and VERY GREAT

alpha of PRE
 EXPERIMENTAL
 with indicated
 column

*.005

.10

alpha of POST
 EXPERIMENTAL
 with POST-POST
 EXPERIMENTAL

*.05

alpha of PRE
 CONTROL with
 POST CONTROL

.75

for LITTLE, VERY LITTLE, and NONE

alpha of PRE
 EXPERIMENTAL
 with indicated
 column

*.025

*.025

alpha of POST
 EXPERIMENTAL
 with POST-POST
 EXPERIMENTAL

.50

alpha of PRE
 CONTROL with
 POST CONTROL

.75

*Significant at the .05 level of confidence

Comfortableness in Handling Personal and Career Changes

Question 11. To what extent do you feel comfortable about handling personal and career changes?

Table 4.11

Frequency Comparisons With Alpha Levels--Question 11

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	9	12	11	9	4
GREAT	27	45	38	36	49
SOME	52	41	44	47	40
LITTLE	10	1	6	7	3
VERY LITTLE	1	1	1	0	3
NONE	1	0	0	1	1

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

*.005

*.05

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.25

alpha of PRE
CONTROL with
POST CONTROL

.25

for LITTLE, VERY LITTLE, and NONE

alpha of PRE
EXPERIMENTAL
with indicated
column

*.025

.25

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.10

alpha of PRE
CONTROL with
POST CONTROL

.95

*Significant at the .05 level of confidence

(see Table 4.11). Post-post tests showed that number decreasing to 49%. There was an increase from 45% to 53% of the control group who responded in the same manner on the pre-test and post-test, respectively.

There was a significant difference between responses on the experimental group's pre-test and post-test and between the pre-test and post-post test when analyzing the responses that are equal to or greater than "great." When analyzing the responses of "little" or less than "little," there was also a significant difference between responses on the pre-test and post-test of the experimental group. These findings reject Hypothesis #1. There were no statistically significant changes within the control group.

Discussion of Career Goals with Supervisor

In this area, very little change occurred in responses after participation in the training program (see Table 4.12). There also was very little difference in the responses from the control group. Statistically, any differences in responses were not significant.

Gathering Career Information

The pre-program number of 15% who had gathered career growth and self development information to a "great" or "very great" extent increased to 35% post-program (see Table 4.13). The number increased slightly to 38% after the four-month period of time. Significant changes were not noted

Discussion of Career Goals with Supervisor

Question 12. To what extent have you discussed career and self development goals and objectives with your supervisor?

Table 4.12

Frequency Comparisons With Alpha Levels--Question 12

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	6	3	6	7	4
GREAT	16	19	19	25	22
SOME	49	55	56	44	49
LITTLE	18	9	9	11	13
VERY LITTLE	6	6	5	10	5
NONE	5	8	5	3	7

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

.75 .50

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.50

alpha of PRE
CONTROL with
POST CONTROL

.25

Gathering Career Information

Question 13. To what extent have you gathered information for helping to further your career growth and self development? Unless your answer is "not at all," please list here the sources from which you obtained the information.

Table 4.13

Frequency Comparisons With Alpha Levels--Question 13

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	3	5	13	5	4
GREAT	12	30	25	12	19
SOME	53	53	51	58	46
LITTLE	21	9	6	12	17
VERY LITTLE	8	3	3	10	10
NONE	2	0	2	3	4

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

*.005

*.005

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.75

alpha of PRE
CONTROL with
POST CONTROL

.25

for LITTLE, VERY LITTLE, and NONE

alpha of PRE
EXPERIMENTAL
with indicated
column

*.005

*.005

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.95

alpha of PRE
CONTROL with
POST CONTROL

.25

*Significant at the .05 level of confidence

within the control group.

There was a significant difference between responses on both the pre-test and post-test and the pre-test and post-post test within the experimental group. These differences were evident when analyzing both the responses relating to "great" and "little." There was not a significant difference between responses on the pre-test and post-test of the control group. Therefore, these findings reject both Hypothesis #1 and Hypothesis #3.

Sources of information listed by the experimental and control groups included: in-house training programs; college classes; peers, supervisors, and managers; professional journals and organizations; and various library resources. Upon completion of the Career Self Management program, participants frequently listed the program as a primary source of information for helping to further their career growth and self development.

Consultation with a Support Network

There was a small increase in consultation within the experimental group after the four-month period of time, although the change was not statistically significant (see Table 4.14). The control group showed no significant change.

Consultation with a Support Network

Question 14. To what extent do you consult with your own network of mentors, role models, and intimates when dealing with your career and self development?

Table 4.14

Frequency Comparisons With Alpha Levels--Question 14

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	2	3	2	5	3
GREAT	14	12	23	18	17
SOME	40	49	39	50	46
LITTLE	22	20	19	14	21
VERY LITTLE	16	12	11	7	7
NONE	6	4	6	6	5

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

.95 .10

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.10

alpha of PRE
CONTROL with
POST CONTROL

.25

Interdependence of Life Areas

Question 15. To what extent do you feel that all parts of your life are interdependent?

Table 4.15

Frequency Comparisons With Alpha Levels--Question 15

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	23	32	24	21	19
GREAT	45	50	50	32	41
SOME	24	14	23	31	25
LITTLE	5	3	0	10	8
VERY LITTLE	3	1	3	14	4
NONE	0	0	0	2	1

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

*.05

.25

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.10

alpha of PRE
CONTROL with
POST CONTROL

.09

for LITTLE, VERY LITTLE, and NONE

alpha of PRE
EXPERIMENTAL
with indicated
column

.25

.10

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.95

alpha of PRE
CONTROL with
POST CONTROL

.09

*Significant at the .05 level of confidence

Greater interdependence within one's life was indicated by participants immediately following the program (see Table 4.15). Prior to the program, 68% responded to "great" or "very great;" these responses increased to 82% immediately following the program. Four months later 74% responded in this way.

There was a significant difference between responses on the pre-test and post-test of the experimental group. Therefore, these findings reject Hypothesis #1. Although there were no significant differences (alpha of .05 or less) between the responses on the pre-test and post-test within the control group, this question with an alpha of .09 had the smallest alpha of the control group. Therefore, this question was closer to a rejection of Hypothesis #2 than any other question on the Career Self Management questionnaire.

Attempt at Keeping Balanced Life Style

A change in the extent that a balanced life style was attempted, although not significant, was noted in the experimental group (see Table 4.16). Fifty-five percent of the respondents stated they attempted to keep a balanced life style to a "very great extent" or a "great extent" after the four-month period of time. This percent is in contrast to the 49% who responded the same way prior to the program. Statistically, no change was noted in the control group.

Attempt at Keeping Balanced Life Style

Question 16. To what extent do you attempt to keep a balanced life style?

Table 4.16

Frequency Comparisons With Alpha Levels--Question 16

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	11	13	16	15	15
GREAT	38	35	38	40	38
SOME	45	44	39	37	41
LITTLE	3	7	5	6	5
VERY LITTLE	3	1	1	1	1
NONE	0	0	0	1	0

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

.95 .50

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.25

alpha of PRE
CONTROL with
POST CONTROL

.75

Use of "Learning Style"

Question 17. To what extent do you use your "learning style" in helping you to determine your most compatible career opportunities?

Table 4.17

Frequency Comparisons With Alpha Levels--Question 17

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	5	6	6	3	4
GREAT	16	41	43	34	31
SOME	49	43	38	48	44
LITTLE	16	8	7	8	11
VERY LITTLE	10	2	3	4	4
NONE	4	0	3	3	4

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

*.005

*.005

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.75

alpha of PRE
CONTROL with
POST CONTROL

.95

for LITTLE, VERY LITTLE, and NONE

alpha of PRE
EXPERIMENTAL
with indicated
column

*.005

*.01

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.50

alpha of PRE
CONTROL with
POST CONTROL

.50

*Significant at the .05 level of confidence

An increase in the use of the participants' learning styles was observed after completion of the Career Self Management program (see Table 4.17). Prior to the program, 21% indicated they used their learning styles to a "great" or "very great" extent. Immediately after the program, 47% answered in that manner. There was no significant change recorded for the control group.

There was a significant difference between responses on both the pre-test and post-test and the pre-test and post-post test within the experimental group when analyzing the responses relating to "great" or "very great." In an analysis of responses relating to "little" or less than "little" there was a significant difference between responses on the pre-test and post-test and a significant difference between responses on the pre-test and the post-post test. These data reject Hypotheses #1 and #3.

Use of "Visualization"

There was an increased application of visualization in post-program situations (see Table 4.18). Prior to the program, 30% of the experimental group responded to "almost always" and "much of the time." Immediately after the program, 33% responded in this manner; four months later, 42% responded to those two answers. The increase, however, was not statistically significant. The responses of "not very

Use of "Visualization"

Question 18. How often do you use the technique of "visualization" when striving toward the accomplishment of a goal or objective?

Table 4.18

Frequency Comparisons With Alpha Levels--Question 18

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
ALWAYS	6	5	8	9	10
MUCH	24	28	34	23	26
SOMETIMES	38	44	43	41	35
NOT OFTEN	19	17	11	13	16
ALMOST NEVER	10	5	4	8	9
NEVER	3	1	0	6	4

for MUCH and ALWAYS

alpha of PRE
EXPERIMENTAL
with indicated
column

.75 .10

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.10

alpha of PRE
CONTROL with
POST CONTROL

.95

for NOT OFTEN, ALMOST NEVER, and NEVER

alpha of PRE
EXPERIMENTAL
with indicated
column

.10 *.01

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.10

alpha of PRE
CONTROL with
POST CONTROL

.75

*Significant at the .05 level of confidence

often," "almost never," and "never," declined from 32% to 23%, pre-test to post-test, then finally to 15% on the post-post test. This was a significant difference between the responses on the pre-test and post-post test of the experimental group. The control group showed no statistically significant change in its use of the technique. These data reject Hypothesis #1 and Hypothesis #3.

Investigation of Career Opportunities Within Company

Participants in the Career Self Management program increased their investigation of in-house possibilities (see Table 4.19). A lasting change was noted as the "great" and "very great" responses rose from 19% prior to the program, to 24% immediately after the program, to 36% four months later. The gain in these responses was matched by a decrease in responses to "little" or less than "little."

No significant change was noted in the control group's responses. However, within the experimental group there was a significant difference between responses on the pre-test and the post-post test when analyzing the responses of "great" and "very great." In regard to responses relating to "little" and less than "little," there were significant differences between responses on the pre-test and post-test and the pre-test and post-post test. These findings reject Hypothesis #1 and Hypothesis #3.

Investigation of Career Opportunities Within Company

Question 19. To what extent have you investigated possible career opportunities within the company?

Table 4.19

Frequency Comparisons With Alpha Levels--Question 19

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	2	7	8	5	7
GREAT	17	17	28	19	16
SOME	44	54	44	53	50
LITTLE	27	16	9	12	15
VERY LITTLE	8	5	7	9	8
NONE	2	1	4	2	3

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

.25

*.025

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.10

alpha of PRE
CONTROL with
POST CONTROL

.95

for LITTLE, VERY LITTLE, and NONE

alpha of PRE
EXPERIMENTAL
with indicated
column

*.05

*.025

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.75

alpha of PRE
CONTROL with
POST CONTROL

.95

*Significant at the .05 level of confidence

Investigation of Career Opportunities Outside Company

Question 20. To what extent have you investigated possible career opportunities outside of the company?

Table 4.20

Frequency Comparisons With Alpha Levels--Question 20

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
VERY GREAT	0	0	3	2	3
GREAT	4	7	9	3	2
SOME	31	39	28	30	23
LITTLE	20	19	22	21	17
VERY LITTLE	25	18	16	18	27
NONE	20	17	22	26	27

for GREAT and VERY GREAT

alpha of PRE
EXPERIMENTAL
with indicated
column

.50 .07

alpha of POST
EXPERIMENTAL
with POST-POST
EXPERIMENTAL

.25

alpha of PRE
CONTROL with
POST CONTROL

.90

The number of participants in the experimental group who investigated outside career opportunities to a "great extent" or a "very great extent" four months after the

training program was 8% versus the 4% who had done so prior to the program (see Table 4.20). This increase was not significant. The control group's responses within the same answer categories remained at the same number over time.

A further statistical analysis of the research data relating to percentiles for the responses within each set of questionnaires was completed. This analysis generated the mean, standard deviation, skewness and kurtosis, and the median for each dependent and independent variable. These findings can be found in Appendices E through I.

In regard to Null Hypothesis #1, Career Self Management Questionnaire questions 1, 4, 6, 7, 8, 9, 10, 11, 13, 15, 17, 18, and 19 did reveal significant differences among the responses of the experimental group to questions on the pre-test, post-test, and post-post test, as indicated by the chi-square tests with alpha values of .05 or less. Although there were significant differences, there were no strong linear relationships among the responses to the three questionnaires. The correlation coefficients of all combinations of paired responses were less than .70 and more than -.70.

Research findings did not reject Null Hypothesis #2, as there were no significant differences between the responses

of the control group to questions on the pre-test and post-test, as indicated by both the correlation coefficients which were less than .70 and more than -.70 and the chi-square tests with alpha values of more than .05.

In testing Null Hypothesis #3, Career Self Management Questionnaire questions 1, 4, 6, 7, 9, 10, 13, 17, 18, and 19 were found to reject this null hypothesis, as these specific questions did reveal significant differences between responses of the experimental group and responses of the control group with respect to career self management behavior changes and perception changes. The experimental group's responses indicated changes in behavior and perception; the control group's responses did not show any statistically significant changes. The differences in responses between the pre-test and post-post test of the experimental group for the indicated questions were significant as indicated by the chi-square tests with alpha values of .05 or less. The differences in responses between the pre-test and post-test of the control group on all questions were not significant as indicated by the chi-square tests with alpha values of more than .05. No significant linear relationships were indicated for either group since all the pairs of responses to the two questionnaires completed by each group had correlation

coefficients with values less than .70 and more than -.70.

Null Hypothesis #4 was not rejected since findings indicated no significant differences of the responses of each set of Career Self Management questionnaires with the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status, as indicated by both the correlation coefficient values of less than .70 and more than -.70 and the chi-square tests with alpha values of more than .05.

In summary, the purpose of the study was to assess the effectiveness of a Career Self Management training program in determining what behavior changes and perception changes occurred for program participants. Research was conducted to test a series of hypotheses that addressed the significant differences between the responses within the experimental group, the significant differences between responses within the control group, the significant differences between the responses of the experimental group and the control group, and the significant differences between the responses on each set of questionnaires with the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status.

It was determined that there were significant

differences between the responses of the experimental group to questions on the pre-test, post-test, and post-post test within the following areas: development of career goals; assignment of self responsibility for one's career; assessment of strengths and weaknesses; assessment of life purpose; importance of analyzing work values; assessment of values and ideals; awareness that life is "always changing;" comfortableness in handling personal and career changes; gathering of information for furthering career growth; realization that all parts of life are interdependent; use of learning style; use of visualization; and investigation of career opportunities within the company.

There were significant differences between responses of the experimental group and responses of the control group within the following areas: development of career goals; assignment of self responsibility for career; assessment of strengths and weaknesses; assessment of life purpose; assessment of values and ideals; awareness that life is "always changing;" gathering information for furthering career growth; use of learning style; use of visualization; and investigation of career opportunities within the company.

No significant differences were found between the responses of the control group to questions on the pre-test

and the post-test. Neither were there any significant differences of the responses on each set of questionnaires with the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status.

Overall, findings were indicative of positive results from the Career Self Management training program, as 65% of the areas researched through the use of the questionnaire were significantly impacted, indicating significant behavior and perception changes.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND REFLECTIONS

Introduction

In this chapter the purpose of this study is summarized; a review of the research methodology and procedures is given; a summary of the research findings is provided; and conclusions, recommendations, and reflections are provided.

Purpose of the Study

The purpose of this study was to assess the effectiveness of the Career Self Management training program provided within the Dow Corning Corporation. The program outline can be found in Appendix J. There was an analysis of data collected from 100 participants in the Career Self Management program and an analysis of data collected from 100 training program non-participants. The data were in respect to behaviors and perceptions regarding career self management. Answers to the following research questions were sought:

1. What career self management behavior changes occurred for program participants?
2. What career self management perception changes

occurred for program participants?

Research Methods and Procedures

The major dimensions of the research methods and procedures included:

1. Securing permission from the Manager of Personnel and the Manager of Education and Training, Dow Corning Corporation, to survey the program participants and non-participants involved in the study.
2. The construction of the research questionnaire composed of questions relating to the career self management behaviors and perceptions.
3. Administering the questionnaire to a pilot group and using the group's feedback for necessary modification of the questionnaire.
4. Administration of the questionnaire to the Career Self Management program participants. The questionnaire was administered to this group immediately before the training program, immediately upon completion of the program, and approximately four months later by mail.
5. Administration of the questionnaire to the program non-participants. The questionnaire was administered

to this group, which was selected from participants of other Dow Corning training programs, during the training program from which they were selected. A second questionnaire was administered four months later by mail.

6. Tabulation and coding of data in preparation for statistical analysis.
7. Application of the following statistical procedures: frequency comparisons; correlation coefficient; multi-variant step-wise linear regression; percentiles, which generated the mean, standard deviation, skewness and kurtosis, and the median for each independent and dependent variable; and the chi-square test.
8. Development of conclusions and recommendations in regard to Dow Corning's Career Self Management training program, corporate career development programs in general, and the evaluation of such programs.

In completing the research, the following null hypotheses were tested:

1. There will be no significant differences between the responses of the experimental group to questions on

the pre-test, post-test, and post-post test, as indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.

2. There will be no significant differences between the responses of the control group to questions on the pre-test and post-test, as indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.
3. There will be no significant differences between responses of the experimental group and responses of the control group with respect to career self management behavior changes and perception changes, as measured by the Career Self Management Questionnaire. Statistical differences will be indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.
4. There will be no significant differences of the responses on each set of Career Self Management Questionnaires with the independent variables of age, sex, Hay points, organizational function, and

exempt/non-exempt status, as indicated by both correlation coefficient values of less than .70 and more than -.70 and the chi-square test at the .05 level of confidence.

Summary of Research Findings

Findings are indicative of positive results from the Career Self Management training program, as 65% of the areas researched through the use of the Career Self Management Questionnaire were significantly impacted, indicating significant behavior and perception changes, as measured by the statistical analyses listed.

It was determined that there were significant differences between the responses of the experimental group to questions on the pre-test, post-test, and post-post test within the following areas: development of career goals; assignment of self responsibility for one's career; assessment of strengths and weaknesses; assessment of life purpose; importance of analyzing work values; assessment of values and ideals; awareness that life is "always changing;" comfortableness in handling personal and career changes; gathering of information for furthering career growth; realization that all parts of life are interdependent; use of learning style;

use of visualization; and investigation of career opportunities within the company. There were no significant differences between responses within the experimental group in the areas of: development of personal goals; perception of company's importance placed on career growth and self development; perception of value in analyzing one's career; discussion of career and self development goals with supervisor; consultation with a support network; attempt at keeping a balanced life style; and investigation of career opportunities outside the company.

There were significant differences between responses of the experimental group and responses of the control group within the following areas: development of career goals; assignment of self responsibility for career; assessment of strengths and weaknesses; assessment of life purpose; assessment of values and ideals; awareness that life is "always changing;" gathering information for furthering career growth; use of learning style; use of visualization; and investigation of career opportunities within the company. There were no significant differences between responses of the experimental group and responses of the control group within the areas of: development of personal goals; perception of company's importance placed on career growth and

self development; perception of value in analyzing one's career; importance of analyzing work values; comfortableness in handling personal and career changes; discussion of career and self development goals with supervisor; consultation with a support network; realization that all parts of life are interdependent; attempt at keeping a balanced life style; and investigation of career opportunities outside the company.

No significant differences were found between the responses of the control group to questions on the pre-test and the post-test. Neither were there any significant differences of the responses on each set of questionnaires with the independent variables of age, sex, Hay points, organizational function, and exempt/non-exempt status.

Conclusions

Based on the research findings, certain conclusions are made in regard to the behavior changes and perception changes of the participants in the Career Self Management training program.

Behavior changes that occurred for program participants were in the following areas: development of career goals; assessment of strengths and weaknesses; assessment of life purpose; assessment of values and ideals; gathering of

information for furthering career growth; use of learning style; use of visualization; and the investigation of career opportunities within the company.

Perception changes that occurred related to the following: assignment of self responsibility for one's career; importance of analyzing work values; awareness that life is "always changing;" comfortableness in handling personal and career changes; and the realization that all parts of life are interdependent.

Other conclusions were also made based on the behavior changes and perception changes that occurred within the group of program participants.

1. A training program designed to meet individuals' career development and self management needs provided a vehicle for behavior and perception changes for those who voluntarily participated.
2. The Career Self Management program provided positive career growth and self development for employees who participated in the training.
3. The instruction provided in the Career Self Management program, based on specific objectives, made a difference in the behaviors and perceptions of the program participants.

4. Program participants were made more aware of themselves within the training program, and, therefore, may develop also a better understanding of others.
5. Program participants were made more aware of how to combine various sets of skills they possess, and, therefore, exited the training program with some new feasible options for further career development and/or life enrichment.
6. Participants gained an awareness of the corporation's commitment to the individual's and the corporation's growth and development through career and self management training.

Recommendations

Based on the findings and conclusions presented in this study, the following recommendations were made:

1. The Career Self Management training program within the Dow Corning Corporation should be strengthened in the following areas: development of personal life goals; emphasis of company support of the importance of career growth and self development; value of analyzing one's career; discussion of career and self development goals and objectives

with one's supervisor; importance of consulting with a network of mentors, role models, and intimates when dealing with career and self development; and importance of maintaining a balanced life style.

2. The study should be extended by surveying the same groups to determine if the behavior changes and perception changes that occurred are permanent changes and to determine if other changes occur with time.
3. The study should be replicated in order to provide further insight into the effectiveness of the Career Self Management program.
4. Corporations that are interested in career planning efforts should use the information provided in this study to provide them with valuable data for implementing similar programs.
5. Corporations that are striving to keep pace with rapid changes, to maintain high performance levels, and to achieve a better return on investment should consider the possibilities a career development and self management program has to offer.
6. Corporations that thrive on a proactive philosophy and wish to have their employees think proactively

should implement a career development and self management program within their organization.

7. Corporations that are interested in developing more realistic career expectations for their employees and in a better matching of individuals and jobs, should implement a career development program within their human resource planning efforts.
8. Corporations that believe individuals should exercise self responsibility for their careers should implement a program of career development and self management.
9. There should be more evaluation of training implemented at all levels within organizations to determine if training objectives are being met and to enhance training program effectiveness.
10. There should be more published information about training evaluation to acquaint organizations with evaluation procedures.
11. There should be more seminars presented on training evaluation methodologies and procedures to teach qualified personnel evaluation techniques.

There should be careful consideration given to the conclusions and recommendations described herein, as future

career development programs and evaluation efforts can benefit from them. Success for career development training programs and the evaluation of them may well depend on such actions.

Reflections

Through the Career Self Management program, Dow Corning employees were provided the opportunity to assess their interests, abilities, choices, and opportunities, and to follow through with objectives and plans.

The commitment of the Dow Corning Corporation, in offering the Career Self Management training program, provided a positive career growth and self development experience that proved to be a vehicle for making a difference in the behaviors and perceptions of those who took advantage of the opportunity afforded them.

Program participants, after focusing on their assessment results, rediscovering the importance of self responsibility, and gaining a new perspective of the interdependence of all areas of one's life, left the program with a reusable process. When properly applied, this reusable process can help them to personally and professionally grow, to feel self fulfilled, and to maintain productivity in their lives.

The Dow Corning Corporation can benefit from the resulting changes of the Career Self Management program, as the employees who reached out for this opportunity are better informed, have a greater understanding of career growth and self development, and have the ability to exercise their strengths in their most productive ways within the corporation. This is the reward for a corporation's commitment to its people and an interest in their growth, development, and self fulfillment.

APPENDICES

APPENDIX A
RESEARCH QUESTIONNAIRE

Date _____

Career Self Management Questionnaire

1. Do you presently have any career goals?

_____ YES

_____ NO

If your answer is "YES," please list one or two of your career goals here:

2. Do you presently have any personal life goals?

_____ YES

_____ NO

If your answer is "YES," please list one or two of your personal life goals here:

3. To what extent do you believe the company considers your career growth and self development to be important?

- _____ 1. To a very great extent
- _____ 2. To a great extent
- _____ 3. To some extent
- _____ 4. To a little extent
- _____ 5. To a very little extent
- _____ 6. Not at all

4. Which of the following represents how you feel the responsibility for your career should be divided between the company and you?

	<u>Company</u>	<u>You</u>
_____	100%	0
_____	80%	20%
_____	60%	40%
_____	50%	50%
_____	40%	60%
_____	20%	80%
_____	0	100%

5. To what extent do you believe there is value in analyzing your career? (Such an analysis would include examination of kinds of work for which you are best suited and that you enjoy most, as well as an analysis of your interests, abilities, values and options available.)

- _____ 1. To a very great extent
 _____ 2. To a great extent
 _____ 3. To some extent
 _____ 4. To a little extent
 _____ 5. To a very little extent
 _____ 6. Not at all

6. Have you recently assessed your own strengths and weaknesses?

_____ YES

_____ NO

If your answer is "YES," please list one or two of your strengths and one or two of your weaknesses here:

7. To what extent have you assessed your life purpose by looking at a combination of your personal qualities and your values?

_____ 1. To a very great extent
_____ 2. To a great extent
_____ 3. To some extent
_____ 4. To a little extent
_____ 5. To a very little extent
_____ 6. Not at all

8. To what extent do you feel that it is important to analyze your work values in order to have career and life satisfaction? (Work values include such values as: recognition, economic security, socioeconomic status, independence, leadership and personal power, creativity and challenge, adventure, and self expression.)

_____ 1. To a very great extent
_____ 2. To a great extent
_____ 3. To some extent
_____ 4. To a little extent
_____ 5. To a very little extent
_____ 6. Not at all

9. Have you recently assessed the values and ideals you hold to be most important within your life?

_____ YES

_____ NO

If your answer is "YES," please list here some of those values and ideals:

10. To what extent do you feel that your life is "always changing?"

- ☐ 1. To a very great extent
- ☐ 2. To a great extent
- ☐ 3. To some extent
- ☐ 4. To a little extent
- ☐ 5. To a very little extent
- ☐ 6. Not at all

11. To what extent do you feel comfortable about handling personal and career changes?

- ☐ 1. To a very great extent
- ☐ 2. To a great extent
- ☐ 3. To some extent
- ☐ 4. To a little extent
- ☐ 5. To a very little extent
- ☐ 6. Not at all

12. To what extent have you discussed career and self development goals and objectives with your supervisor?

- ☐ 1. To a very great extent
- ☐ 2. To a great extent
- ☐ 3. To some extent
- ☐ 4. To a little extent
- ☐ 5. To a very little extent
- ☐ 6. Not at all

13. To what extent have you gathered information for helping to further your career growth and self development?

- ☐ 1. To a very great extent
- ☐ 2. To a great extent
- ☐ 3. To some extent
- ☐ 4. To a little extent
- ☐ 5. To a very little extent
- ☐ 6. Not at all

Unless your answer is "not at all," please list here the sources from which you obtained the information:

14. To what extent do you consult with your own network of mentors, role models, and intimates when dealing with your career and self development?

_____ 1. To a very great extent
_____ 2. To a great extent
_____ 3. To some extent
_____ 4. To a little extent
_____ 5. To a very little extent
_____ 6. Not at all

15. To what extent do you feel that all parts of your life are interdependent? (Examples: Do your work and personal life affect one another? Is your leisure time affected by work or personal life?)

_____ 1. To a very great extent
_____ 2. To a great extent
_____ 3. To some extent
_____ 4. To a little extent
_____ 5. To a very little extent
_____ 6. Not at all

16. To what extent do you attempt to keep a balanced life style? (A balanced life style refers to keeping a balance of your time and energy demands between work and personal life.)

_____ 1. To a very great extent
_____ 2. To a great extent
_____ 3. To some extent
_____ 4. To a little extent
_____ 5. To a very little extent
_____ 6. Not at all

17. To what extent do you use your "learning style" in helping you to determine your most compatible career opportunities? (The personal way you go about gathering information, sorting it out, and making decisions is called your "learning style.")

☐ 1. To a very great extent
☐ 2. To a great extent
☐ 3. To some extent
☐ 4. To a little extent
☐ 5. To a very little extent
☐ 6. Not at all

18. How often do you use the technique of "visualization" when striving toward the accomplishment of a goal or objective? (Visualization is the process by which you can mentally picture your desired goal or results.)

☐ 1. Almost always
☐ 2. Much of the time
☐ 3. Sometimes
☐ 4. Not very often
☐ 5. Almost never
☐ 6. Never

19. To what extent have you investigated possible career opportunities within the company?

☐ 1. To a very great extent
☐ 2. To a great extent
☐ 3. To some extent
☐ 4. To a little extent
☐ 5. To a very little extent
☐ 6. Not at all

20. To what extent have you investigated possible career opportunities outside of the company?

☐ 1. To a very great extent
☐ 2. To a great extent
☐ 3. To some extent
☐ 4. To a little extent
☐ 5. To a very little extent
☐ 6. Not at all

Please check or list the appropriate response.

<u>Age</u>	<u>Sex</u>	<u>Status</u>
<u>20-29</u>	<u>Male</u>	<u>Exempt</u>
<u>30-39</u>	<u>Female</u>	<u>Non-exempt</u>
<u>40-49</u>		
<u>50-59</u>		
<u>60 & over</u>		

Your organizational function: _____

Your number of Hay Points: _____

Name: _____

Mailing Address: _____

APPENDIX B**COVER LETTER FOR RESEARCH QUESTIONNAIRE
(Pre-Test--Experimental and Control Groups)****Career Self Management Questionnaire**

A vital aspect of the education and training function is the evaluation process. I am conducting an evaluation of the Career Self Management program and I am asking you for your help.

Your participation in this evaluation is extremely important. The attached questionnaire is the first segment of the evaluation procedure and your cooperation in completing it is very much appreciated.

The data will be used in the assessment of the program effectiveness and, subsequently, the results will be compiled as part of a doctoral dissertation.

Your individual responses will be kept in the strictest of confidentiality and will be seen only by the researcher. The information you provide will be recognized as being voluntary, and in no way can the candor of your responses affect your career. No responses will be linked with your name and shared with the company personnel.

Your name is needed by the researcher for the purpose of post-training evaluation. Therefore, your name, as well as the other information requested on page 7, will be appreciated.

Thank you for your cooperation and willingness to participate.

Maryann Frederick Cox, Researcher
Consultant to Dow Corning

APPENDIX C

COVER LETTER FOR RESEARCH QUESTIONNAIRE
(Post-Test--Control Group;
Post-Post Test--Experimental Group)

Career Self Management Questionnaire

As you know, a vital aspect of the education and training function is the evaluation process. Four months ago you completed a Career Self Management questionnaire. I am now asking for your help once again in the final stage of this evaluation procedure.

Your participation in this evaluation is extremely important, as the attached questionnaire is your final part of this evaluation procedure, and therefore, it is needed to complete the study.

The data will be used in the assessment of program effectiveness and, subsequently, the results will be compiled as part of a doctoral dissertation.

Your individual responses will be kept in the strictest of confidentiality and will be seen only by the researcher. The information you provide is recognized as being voluntary, and in no way can the candor of your responses affect your career. No responses will be linked with your name and shared with company personnel.

Your name is needed by the researcher for the purpose of questionnaire comparison with the questionnaire(s) you previously completed. Therefore, your name, as well as the other information requested on page 7, will be appreciated.

Please complete the attached questionnaire, including the information that is requested on page 7, and return to me in the enclosed, stamped, self-addressed envelope.

Thank you for your cooperation and willingness to participate.

Maryann Frederick Cox, Researcher
Consultant to Dow Corning

APPENDIX D

CAREER SELF MANAGEMENT FREQUENCY COMPARISONS

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
Question 1. Do you presently have any career goals?					
NO	21	8	9	17	14
YES	78	91	91	83	86
Question 2. Do you presently have any personal life goals?					
NO	13	7	9	12	10
YES	87	92	91	87	90
Question 3. To what extent do you believe the company considers your growth and self development to be important?					
VERY GREAT	2	3	3	7	5
GREAT	30	34	25	38	33
SOME	50	50	55	45	48
LITTLE	10	11	10	7	7
VERY LITTLE	6	2	5	3	5
NONE	1	0	2	0	2
Question 4. Which of the following represents how you feel the responsibility for your career should be divided between the company and you?					
<u>COMPANY</u>	<u>YOU</u>				
100%	0	0	0	0	0
80%	20%	2	5	1	2
60%	40%	8	7	3	11
50%	50%	35	17	31	45
40%	60%	26	25	31	23
20%	80%	25	36	41	17
0%	100%	4	9	3	2

EXPERIMENTAL			CONTROL	
PRE	POST	POST-POST	PRE	POST

Question 5. To what extent do you believe there is value in analyzing your career?

VERY GREAT	38	41	43	33	29
GREAT	48	46	45	42	44
SOME	13	12	9	21	23
LITTLE	0	1	2	2	4
VERY LITTLE	0	0	1	0	0
NONE	0	0	0	0	0

Question 6. Have you recently assessed your own strengths and weaknesses?

NO	24	7	9	23	27
YES	75	93	90	77	72

Question 7. To what extent have you assessed your life purpose by looking at a combination of your personal qualities and your values?

VERY GREAT	4	14	10	6	7
GREAT	18	37	43	27	25
SOME	53	42	37	48	49
LITTLE	13	5	9	13	11
VERY LITTLE	8	2	0	4	4
NONE	4	0	0	2	4

Question 8. To what extent do you feel it is important to analyze your work values in order to have career and life satisfaction?

VERY GREAT	20	30	19	18	17
GREAT	55	59	55	54	55
SOME	25	11	26	26	25
LITTLE	0	0	0	1	0
VERY LITTLE	0	0	0	1	2
NONE	0	0	0	0	0

	EXPERIMENTAL			CONTROL	
	PRE	POST	POST-POST	PRE	POST
Question 9. Have you recently assessed the values and ideals you hold to be most important in your life?					
NO	46	12	15	39	37
YES	53	88	85	60	63

Question 10. To what extent do you feel your life is "always changing?"					
VERY GREAT	17	22	20	11	4
GREAT	36	54	44	44	49
SOME	35	22	34	36	40
LITTLE	6	1	1	6	3
VERY LITTLE	6	1	1	3	3
NONE	0	0	0	0	1

Question 11. To what extent do you feel comfortable about handling personal and career changes?					
VERY GREAT	9	12	11	9	4
GREAT	27	45	38	36	49
SOME	52	41	44	47	40
LITTLE	10	1	6	7	3
VERY LITTLE	1	1	1	0	3
NONE	1	0	0	1	1

Question 12. To what extent have you discussed career and self development goals with your supervisor?					
VERY GREAT	6	3	6	7	4
GREAT	16	19	19	25	22
SOME	49	55	56	44	49
LITTLE	18	9	9	11	13
VERY LITTLE	6	6	5	10	5
NONE	5	8	5	3	7

EXPERIMENTAL			CONTROL	
PRE	POST	POST-POST	PRE	POST

Question 13. To what extent have you gathered information for helping to further your career growth and self development?

VERY GREAT	3	5	13	5	4
GREAT	12	30	25	12	19
SOME	53	53	51	58	46
LITTLE	21	9	6	12	17
VERY LITTLE	8	3	3	10	10
NONE	2	0	2	3	4

Question 14. To what extent do you consult with your own network of mentors, role models, and intimates when dealing with your career and self development?

VERY GREAT	2	3	2	5	3
GREAT	14	12	23	18	17
SOME	40	49	39	50	46
LITTLE	22	20	19	14	21
VERY LITTLE	16	12	11	7	7
NONE	6	4	6	6	5

Question 15. To what extent do you feel that all parts of your life are interdependent?

VERY GREAT	23	32	24	21	19
GREAT	45	50	50	32	41
SOME	24	14	23	31	25
LITTLE	5	3	0	10	8
VERY LITTLE	3	1	3	14	4
NONE	0	0	0	2	1

Question 16. To what extent do you attempt to keep a balanced life style?

VERY GREAT	11	13	16	15	15
GREAT	38	35	38	40	38
SOME	45	44	39	37	41
LITTLE	3	7	5	6	5
VERY LITTLE	3	1	1	1	1
NONE	0	0	0	1	0

EXPERIMENTAL			CONTROL	
PRE	POST	POST-POST	PRE	POST

Question 17. To what extent do you use your "learning style" in helping you to determine your most compatible career opportunities?

VERY GREAT	5	6	6	3	4
GREAT	16	41	43	34	31
SOME	49	43	38	48	44
LITTLE	16	8	7	8	11
VERY LITTLE	10	2	3	4	11
NONE	4	0	3	3	4

Question 18. How often do you use the technique of "visualization" when striving toward the accomplishment of a goal or objective?

ALWAYS	6	5	8	9	10
MUCH	24	28	34	23	26
SOMETIMES	38	44	43	41	35
NOT OFTEN	19	17	11	13	16
ALMOST NEVER	10	5	4	8	9
NEVER	3	1	0	6	4

Question 19. To what extent have you investigated possible career opportunities within the company?

VERY GREAT	2	7	8	5	7
GREAT	17	17	28	19	16
SOME	44	54	44	53	50
LITTLE	27	16	9	12	15
VERY LITTLE	8	5	7	9	8
NONE	2	1	4	2	3

Question 20. To what extent have you investigated possible career opportunities outside the company?

VERY GREAT	0	0	3	2	3
GREAT	4	7	9	3	2
SOME	31	39	28	30	23
LITTLE	20	19	22	21	17
VERY LITTLE	25	18	16	18	27
NONE	20	17	22	26	27

APPENDIX E
PERCENTILES OF PRE-EXPERIMENTAL GROUP

NAME	MEAN	S.D.	SKEWNESS	KURTOSIS	P.50
id	53.5000	30.7436	0.	-1.200000	53.5
function	2.3939	1.1677	0.242077	-1.414697	2.0
haypts	455.7449	209.4871	0.052468	-0.690710	472.5
age	32.7000	8.8597	0.327344	-0.121113	30.0
sex	0.5361	0.5013	-0.146990	2.020492	1.0
status	0.7273	0.4476	-1.036390	-0.945411	1.0
q1	0.7879	0.4109	-1.430134	0.045797	1.0
q2	0.8700	0.3380	-2.234045	3.051598	1.0
q3	2.9050	0.9009	0.872050	1.276981	3.0
q4	39.3000	16.2838	-0.414972	0.024724	40.0
q5	1.7400	0.6760	0.368524	-0.796795	2.0
q6	0.7576	0.4307	-1.220655	-0.520941	1.0
q7	3.1500	1.0672	0.711718	0.889875	3.0
q8	2.0500	0.6723	-0.058505	-0.746607	2.0
q9	0.5354	0.5013	-0.143959	-2.020515	1.0
q10	2.4800	1.0394	0.577480	0.217074	2.0
q11	2.7000	0.8819	0.270476	1.470055	3.0
q12	3.1700	1.1197	0.537610	0.728381	3.0
q13	3.2525	0.9513	0.413954	0.907684	3.0
q14	3.5400	1.1584	0.338546	-0.358270	3.0
q15	2.2000	0.9535	0.799092	0.731004	2.0
q16	2.4900	0.8468	0.388372	0.958631	3.0
q17	3.2200	1.1154	0.487662	0.389638	3.0
q18	3.1200	1.1571	0.399841	-0.090091	3.0
q19	3.2800	0.9752	0.341254	0.308231	3.0
q20	4.2600	1.2112	0.040343	-1.231180	4.0

APPENDIX F

PERCENTILES OF POST-EXPERIMENTAL GROUP

NAME	MEAN	S.D.	SKEWNESS	KURTOSIS	P.50
id	53.5000	30.7436	0.	-1.20000	53.5
function	2.3939	1.1677	0.242077	-1.41470	2.0
haypts	455.6465	208.9499	0.049088	-0.68613	510.0
age	32.6000	8.7178	0.304215	-0.07024	30.0
sex	0.5354	0.5013	-0.143959	-2.02051	1.0
status	0.7200	0.4513	-0.994945	-1.03112	1.0
q1	0.9400	0.3429	0.541180	15.73731	1.0
q2	0.9293	0.2576	-3.401221	9.76521	1.0
q3	2.7500	0.7703	0.329743	0.47866	3.0
q4	34.7000	20.1236	0.310299	-0.22569	40.0
q5	1.7300	0.7086	0.615100	-0.12800	2.0
q6	0.9300	0.2564	-3.422153	9.90895	1.0
q7	2.4400	0.8683	0.235490	0.32856	2.0
q8	1.8100	0.6146	0.133143	-0.45597	2.0
q9	0.8800	0.3266	-2.374505	3.71213	1.0
q10	2.0500	0.7571	0.628751	1.31131	2.0
q11	2.3400	0.7416	0.114775	0.62386	2.0
q12	3.2000	1.1547	1.004204	0.94049	3.0
q13	2.7500	0.8087	0.255759	0.80703	3.0
q14	3.3800	1.0710	0.445118	0.29093	3.0
q15	1.9100	0.8177	0.960501	1.47141	2.0
q16	2.4800	0.8466	0.012882	-0.06117	3.0
q17	2.5900	0.8052	0.411537	0.57328	3.0
q18	2.9200	0.9711	0.432845	0.46356	3.0
q19	2.9800	0.9533	0.183228	0.89734	3.0
q20	3.9900	1.2431	0.341181	-1.10023	4.0

APPENDIX G

PERCENTILES OF POST-POST EXPERIMENTAL GROUP

NAME	MEAN	S.D.	SKEWNESS	KURTOSIS	P.50
id	53.5000	30.7436	0.	-1.20000	53.5
function	2.3939	1.1677	0.242077	-1.41470	2.0
haypts	454.5625	206.5226	0.036980	-0.64520	472.5
age	32.9000	8.7957	0.301851	-0.10700	30.0
sex	0.5556	0.4994	-0.227062	-1.98905	1.0
status	0.7347	0.4438	-1.079773	-0.85190	1.0
q1	0.9150	0.2757	-3.020452	7.38032	1.0
q2	0.9100	0.2876	-2.909132	6.59456	1.0
q3	2.9500	0.9252	0.881315	1.84615	3.0
q4	34.7000	15.6641	0.000307	-0.70086	40.0
q5	1.7300	0.7895	1.276604	2.52253	2.0
q6	0.9091	0.2889	-2.890024	6.48282	1.0
q7	2.4545	0.7989	0.090144	-0.39839	2.0
q8	2.0700	0.6705	-0.081421	-0.73808	2.0
q9	0.8500	0.3589	-1.990373	2.00121	1.0
q10	2.1900	0.8002	0.245060	0.25443	2.0
q11	2.4800	0.8100	0.065902	0.15651	3.0
q12	3.0250	1.0972	0.783660	1.50935	3.0
q13	2.6700	1.0156	0.587269	1.54632	3.0
q14	3.3150	1.1692	0.565055	-0.20913	3.0
q15	2.0800	0.8608	1.007363	2.12995	2.0
q16	2.3636	0.8506	0.133409	-0.05754	2.0
q17	2.6700	1.0156	1.236700	2.30416	3.0
q18	2.6900	0.9178	0.340410	0.22943	3.0
q19	2.9050	1.1649	0.728608	0.74880	3.0
q20	4.0400	1.3902	-0.081390	-0.90185	4.0

APPENDIX H
PERCENTILES OF PRE-CONTROL GROUP

NAME	MEAN	S.D.	SKEWNESS	KURTOSIS	P.50
id	61.5000	35.3624	0.	-1.200000	61.5
function	2.4242	1.1166	0.216478	-1.141674	2.0
haypts	479.4242	213.8205	-0.080879	-0.789677	510.0
age	31.7172	8.4564	0.282377	-0.521827	30.0
sex	0.6500	0.4794	-0.638590	-1.625116	1.0
status	0.7576	0.4307	-1.220655	-0.520941	1.0
q1	0.8300	0.3775	-1.783906	1.206042	1.0
q2	0.8788	0.3280	-2.357056	3.628622	1.0
q3	2.6100	0.8396	0.428147	0.736958	3.0
q4	45.1000	14.6677	-0.196433	0.131086	50.0
q5	1.8990	0.8143	0.304616	-0.518941	2.0
q6	0.7700	0.4230	-1.302795	-0.309318	1.0
q7	2.8800	0.9876	0.630615	1.215562	3.0
q8	2.1300	0.7475	0.523497	1.181956	2.0
q9	0.6061	0.4911	-0.440829	-1.843329	1.0
q10	2.4600	0.8810	0.576213	0.712676	2.0
q11	2.5600	0.8327	0.448539	2.013593	3.0
q12	3.0100	1.1503	0.589663	0.262869	3.0
q13	3.1900	1.0415	0.539196	0.908102	3.0
q14	3.1800	1.1493	0.698071	0.662354	3.0
q15	2.5000	1.1677	0.718479	0.469380	2.0
q16	2.4100	0.9222	0.664443	1.571916	2.0
q17	2.8500	0.9783	1.166611	2.152913	3.0
q18	3.0600	1.2619	0.593010	0.135874	3.0
q19	3.0700	1.0275	0.541840	0.739402	3.0
q20	4.2800	1.3263	-0.134685	-0.923573	4.0

APPENDIX I

PERCENTILES OF POST-CONTROL GROUP

NAME	MEAN	S.D.	SKEWNESS	KURTOSIS	P.50
id	61.5000	35.3624	0.	-1.200000	61.5
function	2.4646	1.1002	0.255799	-1.280699	2.0
haypts	475.5300	214.5198	-0.044359	-0.820579	510.0
age	32.3000	8.3913	0.168918	-0.589024	30.0
sex	0.6400	0.4824	-0.592254	-1.683312	1.0
status	0.2400	0.4292	1.236182	-0.481898	0.0
q1	0.8600	0.3487	-2.106739	2.487710	1.0
q2	0.9000	0.3015	-2.707449	5.438670	1.0
q3	2.8000	0.9744	0.949160	1.757180	3.0
q4	43.3000	14.5682	-0.715412	0.866443	50.0
q5	2.0200	0.8285	0.397268	-0.494893	2.0
q6	0.7273	0.4476	-1.036390	-0.945411	1.0
q7	2.9200	1.0795	0.800885	1.355619	3.0
q8	2.1500	0.7703	0.816748	2.248646	2.0
q9	0.6300	0.4852	-0.546756	-1.736193	1.0
q10	2.4700	0.8582	0.388378	0.403577	2.0
q11	2.5500	0.8333	1.334471	3.410336	2.0
q12	3.1400	1.1549	0.885097	0.866871	3.0
q13	3.2200	1.1154	0.532232	0.269809	3.0
q14	3.2727	1.0863	0.604355	0.565697	3.0
q15	2.3878	1.0806	0.871830	0.809876	2.0
q16	2.3900	0.8396	0.094277	-0.014581	2.0
q17	2.9184	1.0617	1.009704	1.454126	3.0
q18	3.0000	1.2472	0.478138	-0.121487	3.0
q19	3.1010	1.0926	0.418765	0.602793	3.0
q20	4.4545	1.3269	-0.542010	-0.434625	5.0

APPENDIX J
CAREER SELF MANAGEMENT PROGRAM OUTLINE

Day I

A. Introduction

1. Program objectives
2. Two basic truths underlying program
 - a. Everything is "always changing"
 - b. Everything is interdependent
3. Assumptions within program
4. Importance of individual within program format
5. Assignment of self responsibility for life and career growth

B. Purpose of Career Development

1. Finding the right "match" between individual's needs, abilities, and career paths provided
2. Analyzing the "match" and planning for growth

C. Learning Style

1. Personal way one gathers information, makes decisions, learns new information
2. Tool for interacting well with others

D. Balanced Life Style

1. Mind/body/spirit balance

2. Three "boxes of life"

E. Life Reflection

1. Life excursion depicting high and low points experienced
2. "Triggering events"

F. Film: "When Preparation Meets Opportunity"

G. Career Support Networks

1. Mentors, role models, intimates

H. Life Purpose

1. Values
2. Life issues
3. Personal qualities

Day II

A. Steps for Career Planners

1. Gather information re: skills, abilities, opportunities
2. Build support networks
3. Develop options
4. Accept responsibility
5. Plan and persevere

B. Work Values

1. Becoming aware of job/career needs, priorities

REFERENCES

2. Development of job criteria
- C. Skills Assessment
 1. "Root" skills
 2. "Survival" skills
 3. Assessment of strengths, weaknesses
- D. "Brainstorming" Sessions
 1. Combining all information gathered
 2. Developing career/life options
 3. Selecting feasible options
- E. "What Do We Do Now?"--Next Steps
 1. Discussion of goals, objectives with supervisor, personnel development manager
 2. Investigation of career/life opportunities
 3. Promotion/visibility
- F. Career/Life Growth Proposals, Plans
 1. Development of career goals
 2. Development of personal goals
 3. Reality checking
 4. Use of visualization
- G. Summary, Closing

Career Self Management program materials and activities developed from The Inventurers, Leider & Hagberg (1982)

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