

THE EFFECTS OF A STRUCTURED GROUP EXPERIENCE ON THE
TRANSITION FROM THE ROLE OF COLLEGE STUDENT TO
THE ROLE OF WORKING PROFESSIONAL

by
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ABSTRACT

Title of Thesis: Effect of a Structured Group Experience on the Transition from the Role of College Student to the Role of Working Professional

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This study was conducted to investigate the effects of a structured group experience on the transition of new college graduates from the role of student to worker. Fifty-seven subjects, who were employed in their first professional job upon graduating from college, were formed into an experimental group of twenty-nine and control group of twenty-eight subjects. A needs assessment identified ten behaviors which supervisors considered to be indications that a new employee was functioning as a worker rather than a learner. A twenty-two item questionnaire was developed which allowed supervisors to evaluate the degree to which their subordinates were performing the ten target behaviors. A second instrument containing seven items was developed which allowed subjects to report the degree to which they felt they were performing these behaviors. Data were collected from supervisors and subjects using these instruments both before and after treatment. Treatment consisted of a workshop having two components: 1) the presentation of the ten behaviors which supervisors had identified as being desirable, and 2) a structured approach to skill mastery which utilized fantasy, planning and problem solving. Post-treatment evaluations of subjects by supervisors were

significantly higher than the corresponding pre-treatment evaluations, $t(28) = 3.11, p < .01$, providing support for the hypothesis that a structured group experience has a beneficial effect on the transition from the role of college student to the role of working professional.

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¹ Personal communication with the Director of Engineering.

INTRODUCTION

The transition of a neophyte professional from the role of learner to worker is important to both the individual and the organization. Unsuccessful transitions are costly to organizations in many ways, the least expensive being early termination of the employee. Greater penalties often result when the employee stays with the organization, but is an under-producer or in some cases is counter productive (Schein, 1978).

Many organizations report problems in getting new employees "on board." In 1977, a research and development division at the Goddard Space Flight Center experienced 100% turn over in neophyte engineers.¹ An attrition rate of 50% among college graduates in a first job is not unusual (Kotter, 1973) and this turn over has the effect of doubling the initial cost of training a new employee to become a worker. Kotter has found that the length of time needed to get managerial and technical specialists "on board" varies by a factor of five from the fastest to the slowest. This difference in adaptation rates is attributable to variables both in the employee and in the organization.

Kotter (1972) reported that many first line supervisors were found to lack the skills required to help a new graduate get on board in his or her first job experience. A primary skill needed by both

¹ Personal communication with the Director of Engineering.

supervisor and employee is the ability to communicate goals and to negotiate a viable psychological contract. Development of such a contract depends on a supervisor clearly outlining what he or she considers to be the main criteria for successful job performance. Another important ingredient is accurate feedback to the employee about how well he or she is meeting these criteria. Kotter found that group experiences assisted new employees in their effort to learn the realities of a new organization's environment. Knowledge of realities is valuable in establishing behavioral norms and boundaries within which a psychological contract can be negotiated.

A common cause of unsuccessful transitions is inaccurate understanding, on the part of the individual, about what constitutes professional performance (Schein, 1978). The criteria for professional performance are usually determined by an employee's immediate supervisor. A neophyte's first task is to discover what behaviors he or she must exhibit, in order to meet these criteria. Once they are identified, the next task is to master the skills required to perform them.

McClelland (1966) has developed a training program aimed at teaching skill mastery which has been shown to be effective in learning behaviors associated with achievement. It focuses on a structured approach to learning which is applicable to a wide range of objectives. Once a person has mastered the process of skill

mastery, he or she can apply it in order to learn to perform any behavior or accomplish any task that they choose.

A major component of this project was to operationally define some salient behaviors which are expected by supervisors. This was accomplished by a series of interviews with supervisors using the critical incident technique (Flanagan, 1954). The behaviors which emerged were used as part of the content for a workshop whose goal was teaching skill mastery and accelerating the process by which a neophyte exhibits professional performance.

The workshop was structured on a model developed by Weiss (1976) for assisting people through important life transitions. The content and activities have been altered in order to make them more appropriate for the transition being examined.

The subjects were 57 new employees at the Goddard Space Flight Center, and were employed in their first professional position upon graduation from college. Approximately half of the subjects are scientists and engineers and the other half are professional administrators. Subjects were randomly assigned to two comparison groups. One group attended the workshop which consisted of four sessions, each two hours in duration. The other group was given a placebo treatment consisting of a brief lecture in which the behaviors which supervisors have identified as being valuable were presented. A questionnaire was designed which measured the degree in which each

subject exhibited the desired behaviors. Supervisors completed the questionnaire before and after treatment. A second questionnaire was designed which measured a subject's self-image on the dimension of learner-worker. Each subject completed this questionnaire before and after treatment.

Theories of Adult Development and Career Development

The fields of general adult development and career development are pertinent to the study of this transition. This review will address several major theories which contribute to an understanding of the topic. The first three by Erikson (1950), Havighurst (1952) and Levinson, Darrow, Klein, Levinson, and McKee (1956) are compared with general theories of adult development. The other theories by Datta, Thompson and Pryor (1974), and Schuler (1978) focus more specifically on the career development process. Each of the theories divides development into sequential stages and identifies a period during which entry into the work world occurs.

Erikson (1950) has described human development as a series of eight sequential stages. While this theory is rooted in psychodynamic theory, the focus is on psychological rather than biological factors. The theory is more concerned with the individual's self-concept and the role of the environment in the development of the self. The theory is more concerned with the individual's self-concept and the role of the environment in the development of the self. The theory is more concerned with the individual's self-concept and the role of the environment in the development of the self.

REVIEW OF THE LITERATURE

This chapter reviews the literature related to the processes by which a person makes the transition from the role of college student to working professional. The following areas will be addressed:

- o theories of adult development and career development
- o establishing a career
- o transitions

Theories of Adult Development and Career Development

The fields of general adult development and career development are pertinent to the study of this transition. This review will address several major theories which contribute to an understanding of the topic. The first three by Erikson (1950), Havighurst (1952) and Levinson, Darrow, Klein, Levinson, and McKee (1978) are concerned with general theories of adult development. The other theories by Dalton, Thompson and Price (1979), and Schein (1978) focus more specifically on the career development process. Each of the theories divides development into sequential stages and identifies a period during which entry into the world of work occurs.

Erikson (1950) has described human development as a series of eight sequential adult age stages. While this theory is couched in psychodynamic terms, the focus is on psychosocial issues rather than biological and sexual growth as Freud had described. Each stage is seen as a turning point during which individuals must resolve issues with which they are confronted. One's personality

and behavior pattern are largely formed by the manner in which the issues are resolved. While a specific entry into a career is not specified as a major event by Erikson, he does designate the entry into early adulthood as beginning at about age twenty. The major issue to be resolved at this point is maturation of interpersonal relationships and fusion of one's identity with other individuals and institutions. If these issues are not satisfactorily resolved, the individual tends to become isolated and alienated. S/he is unable to give fully of him or herself and avoids the intimacy required for successful adult functioning.

Havighurst's (1952) theory is based on human learning and states that people in modern society are confronted with developmental tasks throughout their life. Satisfactory progress occurs as one learns to master these tasks. Each life stage has unique tasks which are associated with it and successful task mastery leads to happiness and an opportunity for continued growth. Failure to master tasks results in unhappiness, disapproval by society and difficulty in learning to perform later tasks. Havighurst identifies six specific periods to life, and each period has from six to ten tasks associated with it. He states that a task must be mastered at the appropriate life stage or it may never be fully accomplished. Tasks can be divided into the three categories of biological, cultural and self imposed. Although tasks must be mastered at the critical life stage, they may re-occur with new aspects at a later time. The initial

mastery of the task facilitates its being successfully performed as it reappears later in life.

Levinson et al. (1978) view human development as putting together a life structure which is composed of one's social-cultural world, inter-personal relationships and roles, and self concepts. The life structure is a sequence of stable periods (six to eight years long) and intervening transition periods (four to five years each). During a stable period one makes choices and works on obtaining specific goals. In contrast, during a transitional period one ends the prior stage life structure and works toward the initiation of a new structure. Levinson et al. see transitions as periods of growth during which one learns new roles and experiments with new relationships. This trial and error process is instrumental in modifying an individual's self concept and it is often accompanied by "growing pains." It is during the period from ages 20 to 27 (labeled "entering the adult world") that one assumes the new role of worker while abandoning the role of student.

The four major tasks of this period are: forming a "Dream," forming a mentor relationship, forming an occupation, and forming love relationships, marriage and family. The first three of the four tasks are related to career development which seems to compete with the fourth for the person's energy. This competition can cause later life problems because "Those who betray the Dream in their twenties will have to deal later with the consequences"

(Levinson et al., 1978, p. 92). The best chance for finding personal fulfillment is to build a life structure around the Dream in early adulthood. Levinson et al. acknowledge that the Dream is an elusive concept that may best be understood by its portrayal in mythology and literature. It seems to be a vague sense of self-in-the-adult-world; a fantasy which generates the energy needed for the planning of a life structure.

Levinson et al. state that one of the most important and complex relationships a young person can have is the mentor relationship. The mentor is a neophyte's teacher, advisor and sponsor. Again, the concept of "mentor" is elusively defined in terms of the character and function of the relationship rather than as a formal role with prescribed behaviors.

The next two theories focus exclusively on the career development process. Dalton, Thompson and Price (1979) have postulated four stages of career development which have not been given formal labels. In Stage I an individual acts as an apprentice, helping and learning from one or more mentors. In Stage II he or she demonstrates competence as an individual. In Stage III he or she broadens and acts as a mentor for others. Those in Stage IV manage the organization and guide it in new directions.

It is during Stage I that one assumes a first full time position and begins to work on the process of becoming a professional. He or she must learn to perform some of the organizations tasks competently

and discern which elements of the work are most critical and require the greatest attention. He or she must learn how to get things done using both the formal and informal channels of communication. While work activities are usually quite routine, the neophyte is best regarded who takes initiative and assumes modest risks in finding innovative ways to carry out these activities.

Dalton et al. (1979) state that the primary role in Stage I is being a subordinate. The neophyte must develop a mentor relationship and learn how to be a worker by being directed, by trial and error corrections, and by observing how the mentor behaves.

In the process of becoming a subordinate, an individual must make a psychological adjustment to accepting directions and to involvement in a dependent relationship. This adjustment may be difficult for those young adults who have recently successfully become independent from their parents.

Schein (1978) has hypothesized that individuals are simultaneously developing along biosocial, familial and career paths. He divides life into four stages: adolescence, early adulthood, middle adulthood, and late adulthood. Each of these stages contains as many as three substages and there seems to be some overlap of activity in adjacent stages. Entry into the world of work is designated as a substage of adolescence and takes place between ages sixteen and twenty-five. However, the substage which includes full membership in an early

career is part of the early adulthood stage and takes place during the age range of seventeen to thirty. Somewhere during this period a person enters his or her first permanent career job.

In viewing the transition process associated with this job, Schein includes the dynamics which the neophyte's first boss encounters upon having this young employee in his or her charge. The interaction between supervisors and subordinate is viewed by Schein as a critical ingredient in the success of this substage of development. This is something of a departure from other theories which tend to view the supervisor as a static entity and the employee as a developing person. By conceding that organizations do change, the neophyte is given some leverage in the important task of negotiating a psychological contract with his or her supervisor.

The theories of general adult development and career development which were reviewed have several common elements. The most important is the concept of an individual preceding through a series of development stages. The successful negotiation of each stage requires the completion of developmental tasks or the resolution of developmental issues unique to that stage. Satisfactory completion of tasks equips one to move to subsequent stages and usefully employ the skills which have been accumulated in prior stages. With the exception of Dalton et al. (1979), each model associates ranges of age with a particular life stage. Erikson (1950) and Havighurst (1952) are most general in specifying the age ranges during which a

stage may occur. Super (1963) is much more specific about the limit of age ranges during which a stage is likely to occur. Schein (1978) and Levinson et al. (1978) allow overlaps in the age ranges of contiguous stages which sometimes makes it difficult to identify in which stage an event is occurring.

Most models include developmental tasks associated with social, psychological and career growth. Erikson (1950) and Havighurst (1952) and Levinson et al. (1978) focus on social and psychological aspects. Dalton et al. (1979) and Schein (1978) direct greater attention to career aspects. There is little differentiation between tasks which are related to different sub-populations; the tasks are the same regardless of sex, race, education or the lifestyle of the individual.

Campbell et al. (1979) have synthesized other career and developmental theories and found that the literature seems to indicate that four major phases take place during one's career: (1) preparation, (2) establishment, (3) maintenance and (4) retirement. This conceptualization has also been outlined by Super and Hall (1978). Campbell et al. go a step beyond other theorists in stating that career development stages are not always sequential, nonrepeatable and age related. They point out that people change jobs in mid-life, enter the work force during late adulthood and come out of retirement to start over. Thus an eighteen year old obtaining a first job, a thirty-five year old entering the job market

for the first time, a fifty year old changing jobs and a sixty-five year old coming out of retirement are all faced with the tasks associated with establishment stage; and it is not unusual that a person may go through all of the cycles outlined by Campbell et al. several times during their lives.

Establishing a Career

Since the topic of this investigation is the transition associated with a first job, the literature review will focus on the establishment stage which is when this transition occurs.

Most theories of adult and career development postulate a life stage which can be termed "beyond adolescence," and describe tasks which are performed during that stage. Erikson (1950) states that interpersonal intimacy is the major task to be performed. Havighurst (1952) lists selecting a mate, adjusting to marriage, and starting a family as the major tasks in this period. Energy to perform these tasks must be shared with beginning an occupation and competition for one's time and energy during young adulthood often causes one or more tasks to be neglected. Levinson et al. (1978) discussed the importance of establishing an occupation during the period they have labeled "entering the adult world." These tasks require commitment to an occupation and the modification of fantasies as world realities become apparent.

Campbell et al. (1979) have described neophytes as being naive to the complexities of the work environment. They will spend a great

deal of time learning the behaviors which are generally grouped under the term "working." This includes the discovery of ways in which successful behaviors for the new role of worker and in the new environment of working are different from the successful behaviors in the role of learner and in the environment of learning.

Campbell et al. (1979) have identified three tasks which must be accomplished to successfully complete entry into the world of work. First, they must establish satisfactory relationships with peers and supervisors in order to become oriented and adapt to the organizational environment. Next they must learn the behaviors which are required for successful performance of the job, and demonstrate mastery of these behaviors to their supervisors. Finally, some sort of self assessment must take place in which they determine whether the rewards associated with satisfactory job performance are up to their expectations, and they must begin considering future career planning.

Other theorists directed their attention exclusively to the career development process. In formulating his theory of career development Super (1953) has identified the establishment stage as the one in which individuals attempt to choose an occupation and establish a permanent career. During the establishment phase, individuals must perform tasks which employ the skills learned during previous stages. The performance of these tasks confirms that the individual's

career choice was a good one; and that the organization has made an equally good choice in selecting that person for that job.

Havighurst (1964) has identified six stages of career development. In the fourth stage, "becoming a productive person," individuals master the skills which are required to perform a job and which have been learned in a prior stage. Schein (1978) has divided work life into nine overlapping stages of career development. During the overlapping stages titled "Basic Training" (ages 16-25) and "Full Membership in Early Career" (ages 17-30) individuals assume a full time first job and begin to except the responsibilities of that position. They establish relationships with co-workers, develop confidence in their ability to perform, and generally "learn the ropes" of being a worker.

The final theory reviewed here is Tiedeman's (1961). It differs from the other theories in that it conceives career development as a decision making process rather than a series of sequential growth experiences. Tiedeman states that the decision making process is made up of anticipation and implementation. All of the tasks leading up to entry into an occupational field are summed under the label, anticipation. Implementation involves the process of adjusting to that choice and covers the period during which individuals adjust to the demands of the work environment. They modify personal behaviors in order to gain membership in peer groups. After this period of becomming acclamated to the organization, the

individual feels confident to exert pressure for change, rather than continue to totally conform to organizational requirements. This process is similar to Schein's (1978) tasks of learning the ropes and learning how to get ahead.

Transitions

Weiss (1976) has stated that there are three distinct forms of stressful situation. The first is that situation which Lindemann (1944) has termed "crisis." During the course of a crisis an individual's resources must hastily be summoned to cope with situation. The most notable characteristics of a crisis is that it is usually of limited duration, it imposes a very high stress upon those exposed to it and its onset is quite sudden. Caplan (1965) has estimated that a crisis is usually between one and six weeks in duration. Weiss (1976) states that a crisis ends by return to a pre-existing situation or by a persistent disruption of that situation. If the pre-existent situation does not become re-established, the second form of stressful situation, the "transition" or "transition stage" occurs.

This is a more extended period of time during which an individual undergoes personal changes and changes in relationships with others. Parks (1971) has said that transitions produce intense upset and the manner in which they are managed will usually effect the later course of a person's life. Unlike a crisis, during a transition one is more likely to use whatever personal resources are available. Individuals

within transition states seem remarkably accessible to being helped and for this reason great emphasis should be placed upon providing needed assistance during this period. A transition ends with the establishment of a new, stable, life organization and an identity which has been modified as a result of the transition process. If the new life organization is not sufficient to meet the individuals needs, s/he enters what Weiss (1976) terms a "deficit situation." This situation may continue for a long time and an individual will experience prolonged dissatisfaction and unhappiness for its duration. Successful intervention during a transition state will result in the deficit situation to be avoided.

Schlossberg (1978) has developed a model for analyzing human adaptation to transition which integrates major aspects of models developed by theorists such as Parks, Zill, Libermann, Lipman-Blumen, and Lowenthal, Thurnher, and Chiriboga. She postulates three major clusters of valuables which influence adaptation to all forms of transitions whether it be a new job, a new marriage or some personal loss. The clusters are: characteristics of the particular transition, characteristics of pre and post-transition support systems, and characteristics of the individual. While these determinants of outcomes have multiple factors which contribute to their particular variability, their sum is what Schlossberg refers to as adaptation. In this model she formulates "characteristics of the particular transition" as being made up of six factors: role change,

affect, source, timing, onset, and duration. "Characteristics of pre-transition and post-transition support systems" are made up of three elements: interpersonal support systems, institutional supports, and physical setting. Finally, the "characteristics of the individual" are composed of sex, age, state of health, race, socioeconomic status, value orientation, psychosocial confidence, and previous experience with a transition of a similar nature.

Kotter (1973) has identified the first job assignment and first supervisor as two important variables in the success of what he terms "the joining up process." He states that the first assignment should be a combination of training and responsibility for tasks which are modest enough to be successfully completed, yet challenging enough to provide a feeling of accomplishment for the neophyte. The assignment should also provide an opportunity for the new employee to meet people, become acquainted with the organization, and identify those skills which s/he wants to enhance in order to facilitate future growth. No matter how effectively this assignment is chosen, its potential for growth will not be attained unless continuous feedback is given to the employee by his or her supervisor. For this reason, the first supervisor has a lasting effect on the career of an individual. Kotter states that this supervisor should have the skills and knowledge needed to help create a sound psychological contract. S/he should be a good coach and teacher, and must be knowledgeable enough about the organization to allow the

neophyte to gradually edge into its mainstream. The supervisor must perceive that part of their own reward system is based on effective management of the new employees joining up process and that this function is as important to goals of the organization as producing a product.

Schein (1964) states that the success of a neophyte in a first job depends largely on the skills of his or her supervisor and recommends that supervisors be specially selected for the training and induction of new college graduates to the organization. He assumes that the organization bares the primary responsibility for helping a new person through the difficult period of adaptation, and ineffective supervisors will defeat this process. The new graduate is often viewed as too theoretical, idealistic and naive in their expectations of the world of work and must be introduced to its realities. This may result in what Schein terms "the up-ending" experience in which the supervisor sets out to deliberately violate the new employees expectations about the organization and his or her self image. It can take form of assignment to menial tasks or tasks in which failure is inevitable or "dutch uncle talks" in which the supervisor attempts to persuade the neophyte that his or her expectations have been unrealistically developed by college or recruiters. Schein recommends a combination of training and work assignments which he terms "integrative strategies." These strategies specify the optimum balance between training and working

which is unique to each job. It differs from on the job training in that the nature of the training and time dedicated to it is specifically defined, rather than allowing the supervisor to devise a subjective mix as is often the case in on the job training.

Hall (1968) stated that a transition may be viewed as the modification of one's subidentity. The subidentity is that portion of the primary self that is relevant to a particular social role, such as the role of worker. Changes in subidentity are affected by some salient event which van Gannep (1960) has termed "the rights of passage." Hall stated that a transition is composed of the three discreet phases: separation from the original environment, initiation from the old role into a new one, and the incorporation for reintegration into the original environment. The initiation phase is a visible portion of the process and in his study took the form of the general qualifying examinations which candidates for a doctor's degree would have to undergo. Hall measured the difference between the student's self identity and perceived role of professor, before and after taking these examinations. Following the examinations, students perceived themselves as being more similar to professors than they had been before. Their perceptions of the professor role had not changed substantially, but their individual subidentities had changed in a way to make them more congruent with the professor role.

Huntington (1957) examined the process by which medical students began to perceive themselves as doctors. She found that students

tend to develop a self image which reflects the images others have of them. Students who felt that their patients assigned them the role of physician were more likely than other students to begin to think of themselves as doctors. Some students performed prescribed medical treatment for patients while others were presented with medical problems by the patients. The latter's self image tended to be more of the physician than student. Finally, those students who felt that they handled medical problems without difficulty showed that greater tendency to develop the professional self image. These findings support Schein's conclusions that it is important for a neophyte to be given assignments which challenge his or her skills, yet which have a high probability of resulting in a successful outcome. When such opportunities are provided, the new employee begins to develop the self image of working professional and the transition from the role of college student progresses rapidly.

Schein (1978) states that a primary function of the first supervisor of a new employee is to serve as a role model for professional behavior. One of the difficulties that may arise from this modeling is that the employee begins to learn norm values and behaviors which are not useful in latter stages of his or her career. Different norms exist at different heirarchial levels within the organization. To avoid this problem, an employee should be given a broader view of professional values and behaviors which may grow and be modified as his or her career progresses. For this reason,

the induction and socialization process should be closely monitored by the organization.

Schein (1978) has identified five tasks which individuals must perform in order to successfully enter an organization. The first task, "accepting reality," is similar to that described by van Mannen. The second dealing with resistance to change requires the individual to realize the limited effect he or she can have on the organization. The third, "learning how to work," requires that the individual cope with too much or too little job definition. The fourth task, "learning how to get ahead," means that the individual must learn what behaviors are considered to be desirable by the organization and learn how to perform these behaviors. The final task, "locating one's place in the organization and developing identity," requires the employee to enter into a day to day pattern of behaviors which are mutually satisfactory to him or her and to the organization.

Hall (1976) has identified tasks which are required for successful entry into an organization. The new employee must establish good relationships with his peer group and supervisor. He or she must also come to understand the organizational reward structure and plan ways in which behaviors can be performed which are likely to be rewarded. In addition to becoming socialized, individuals must demonstrate confidence in performing their responsibilities.

Campbell et al. (1979) postulate that two parallel processes begin when a new employee is hired. The first is "learning the

ropes" (Schein, 1978) or "breaking in and joining up" (van Mannen, 1975). These phrases describe the tasks of a newcomer to a work environment in which he or she has little understanding of job responsibilities or the structure of the environment. The second process is the organization's learning what attributes and characteristics the new employee brings to the job. The organization's task is to acquaint the employee with the work environment and its formal and informal rules and regulations. Van Mannen (1972) calls these tasks "organizational socialization," in which a person learns values, norms, and behaviors which allows him or her to attain membership. Hughes (1958) describes this process as "reality shock" and its magnitude depends upon the discrepancy between the new employee's expectation and organizational reality. Reality refers to such situations as being given more or less challenge on a first assignment than had been expected. Van Mannen calls the process of finding solutions to these tasks "socialization," because they often involve changes in attitude on the part of the employee.

Several investigators have reported that group experiences are valuable in assisting people in transitions in moving toward a more stable state. Weiss (1976) has developed a group treatment aimed at facilitating the transition resulting from marital separation. His research indicates the need for three types of helping agents to be presented in order to maximize success. The first is the "expert" who provides cognitive content to the group experience. This

allows participants to formulate a scenario of likely occurrences that s/he may encounter. Another necessary ingredient in a successful program is the sharing of experiences by a "veteran." A veteran is a person who has recently completed the transition and who can vouch for the validity of the cognitive material as well as accurately empathize with the participants' emotional state. Finally, membership in a supportive discussion group is required to offer "... immediate understanding that comes only from being in the same boat" (Weiss, 1976, p. 226). The transition situation is unlikely to be shared by friends or family. The individual may develop a sense of not being a member of the community and social isolation can retard the process of transition.

Hall (1969) studied the relationship between success on doctoral qualifying examinations and participation in a study group. He found a significant correlation between these variables for students with low or medium grade point averages. Success in passing the examination was positively correlated with self confidence, but not group participation for those students with high grade point averages.

Group activities and workshops have been found to be useful in opening communications between employees and their supervisors (Kotter, 1972, 1973). Communications stimulate the active negotiation of a psychological contract rather than let it evolve by chance. Group activities with other new employees are equally important because they allow a broader perspective to be developed

by the individual on the significance of what's happening.

Communications between neophytes tend to reduce biases which arise from contact with only one supervisor, a particular group, or a fortuitous event. New employees may then judge whether their experiences are consistent with those of their peer group, or whether they represent activities which are unique to a particular work environment.

In summary, the literature from organizational development identifies two categories of activities that are important during the establishment stage. The first is the process of socialization between the individual and the work environment. It includes learning the formal and informal rules, and the structure of the organization as well as establishing interpersonal relationships with peers and supervisor. The second is the development by the individual of those behaviors which allow him or her to perform satisfactorily on the job and generate confidence on the part of the organization that the individual does indeed fit in. Group experiences have been shown to aid neophytes in the performance of these growth activities.

METHODOLOGY

This study was undertaken in order to determine the effectiveness of a structured group experience or workshop on the transition of a new college graduate from the role of college student to the role of working professional. Fifty-seven subjects were divided into two comparison groups. An experimental group of twenty-nine subjects participated in a structured group experience and a control group of twenty-eight subjects attended a lecture on cognitive content of the group experience. The dependent variable, which assessed the outcome of the treatment, was the subjects' professional performance as measured by a behaviorally based appraisal by his or her supervisor. If supervisors ratings of the experimental group showed significant gain in performance, support would be provided for the hypothesis that the treatment is valuable in assisting people through his transition.

Subjects

The subjects for this study consisted of professional employees at the Goddard Space Flight Center (GSFC) who were in their first professional full-time position. All but three participants were under thirty years of age and all had been employed at GSFC between six and thirty months. Each of the subjects was participating in the standard orientation program at GSFC entitled the "Professional Intern Program". It consists of a series of lectures about the goals, missions and projects in which the Center was engaged as well as

formal training programs at GSFC and local Universities. The professional intern program is variable in length and usually lasts between three and five years. The subjects in this study represented the total number who met the criteria of (1) being in a first professional job, (2) having between six and thirty months tenure, and (3) being willing to participate. Only one potential subject declined to participate in this study. An analysis of the gender and professional discipline of the subjects is shown in Table I.

Table 1

Gender and Professional Discipline of Subjects

Group	Technical	Administrative	Total
Experimental			
Male	10	6	16
Female	6	7	13
Total	16	13	29
Control			
Male	10	2	12
Female	5	11	16
Total	15	13	28

Dependent Variable

The dependent variable was defined as the degree to which a subject has completed the transition from the role of college student to the role of working professional. It is measured by the subject's performance of professional behaviors as reported by a supervisor.

In order to identify these behaviors, eight supervisors were interviewed using the critical incident technique developed by Flanagan (1954) (see Appendix A for interview data). The interviews resulted in the identification of ten behaviors which were deemed by the supervisors to indicate that a new employee was performing as a professional. A twenty-two item evaluation form was devised which measured the degree to which an employee exhibited the professional behaviors (see Appendix B). The first sixteen items on this instrument measure how frequently the desired behaviors were observed and the last six items measure how well they were performed. Not all of the behaviors could be measured in terms of "how often" and "how well", thus the unequal number of items in the two parts. In order to establish content validity for the instrument it was reviewed by four trained raters. The behaviors which resulted from the original supervisors interviews were referenced to each item on the instrument. A score of one, two or three corresponding to "inaccurate", "exceptably accurate", and "completely accurate" was awarded for each item. In order to be included in the questionnaire, an item needed to have a total score of eight or more.

A second questionnaire was devised for the purpose of allowing subjects to report their self-image on the dimension of learner-worker (see Appendix C). While the substance of the seven items in this instrument focused on those issues raised in supervisors

interviews, it was not behaviorally based as was the case of the supervisor's questionnaire. Items were designed to allow subjects to report whether they felt they were operating in a manner consistent with the general performance desired by supervisors, and whether they perceived themselves as professionals or trainees. It also allowed subjects to report the level of confidence which they experienced in performing job duties.

If scores on this instrument improved for the experimental group support would be provided for the hypothesis that the treatment assisted people in assuming the role of professional procedures.

Independent Variable

The independent variable in this study was a group experience structured around the model presented by Weiss (1976) and discussed in the review of the literature. The major departure from the Weiss model was the nature of the information which the "expert" provided. The bereaved were told about the variety and intensity of emotional reactions they might experience as a result of the loss of a loved one. The subjects in this study were given a list of behaviors which supervisors had identified as being indicative of professional performance.² Each behavior was described in detail and an example was given of how the behavior might be performed in a typical job setting. The group discussed each of the behaviors and

² See Appendix D for the treatment manual.

subjects were asked to consider ways in which they might have an opportunity to exhibit them in their job.

The main activities undertaken during the workshop were adapted from an approach to skill mastery developed by McClelland (1965). It employs extensive use of fantasy in order to develop what McClelland has termed "achievement motivation." "Achievement motivation" was chosen as a goal of treatment because of its important contribution to organizational climate. In three simulated business organizations, Litwin and Stringer (1968) found that "achievement" climate was more desirable than "power" or "affiliation" climates in obtaining organizational goals. The authors described organizational climate as being similar to human need as conceptualized by McClelland (1953). These studies establish a connection between organizational success and an organizational climate which stresses achievement thinking and achievement behavior by employees. McClelland and Alschuler (1971) reported that life management skills can be learned or improved by the use of achievement motivation training. Behaviors or skills which supervisors identified as being professional are vital to professional life management, thus the second component of the treatment consisted of a workshop in which achievement skills were learned. It was hypothesized that once this was learned, subjects would use achievement mastery to become proficient in learning and exhibiting professional behaviors.

Procedure

The experimental procedure began with pretreatment measurements. Evaluation of each subject was performed by his or her supervisor and each subject completed a self-appraisal instrument. Treatment consisted of four sessions, each two hours in duration. The four sessions took place on consecutive Mondays and Wednesdays from 9:00 a.m. to 11:00 a.m. Experimental subjects were divided into groups of fourteen and fifteen people respectively and the second treatment group took place the week after the completion of the first treatment group. During the four week period during which treatment groups were being held, the control group was given a placebo lecture. They were told that they had been selected to participate in a workshop on professional skill development. The goals of the workshop were presented as well as some activities. The needs assessment procedure was outlined and the ten behaviors, which were its outcome, were described and examples given. Every attempt was made to provide the control group with the important content of the workshop, but not with the group experience. They were also told that they were being scheduled for a workshop to be held later in the year. Three months after the completion of treatment, all fifty-seven subjects were re-evaluated by supervisors and again filled out the self-appraisal forms which they had completed before treatment began.

Test Statistic

The statistical analysis employed in this study consisted of a t test to determine the difference between the means of two sets of scores. This statistic was employed to make comparisons for both the supervisors evaluation and the subjects self-appraisal. The .05 level of significance was utilized in this design.

Design

P_1 ——— P_2 ——— X_1 ——— D_1 ——— D_2

S_A ——— R_C

P_1 ——— P_2 ——— X_2 ——— D_1 ——— D_2

S_A = Selection - all Subjects

R_C = Randomization - Complete

P_1 = Subject Pre-treatment Self-Appraisal

P_2 = Subject Pre-treatment Self-Appraisal

X_1 = Structured Group Experience for Experimental Group

X_2 = Placebo lecture for Control Group

D_1 = Supervisors Post-treatment Evaluation of Subjects

D_2 = Subjects Post-treatment Self-Appraisal

Null Hypothesis

H_0 : Mean of D_{1E} - Mean of P_{1E} = 0

Subscripts:

Mean of D_{2E} - Mean of P_{2E} = 0

E = Treatment Group

Alternative Hypothesis

H_1 : Mean of D_{1E} - Mean of P_{1E} $\neq$ 0

Mean of D_{2E} - Mean of P_{2E} $\neq$ 0

RESULTS

The purpose of this study was to determine if a structured group experience would facilitate the transition from the role of college student to the role of working professional. A needs assessment was performed which resulted in supervisors identifying ten behaviors which they considered to be indicative of professional behavior (Appendix A). In order to measure employees performance of these behaviors, two instruments were devised and administered: (1) a supervisor's questionnaire (Appendix B) which was completed by the supervisor of each subject and (2) an employee's questionnaire which was completed by each subject (Appendix C).

The needs assessment consisted of interviews with eight supervisors and resulted in the identification of ten "working professional" behaviors. Most supervisors identified only a few behaviors and none could specify more than three of the final ten. Table 2 presents a matrix of the behaviors and the number of supervisors who endorsed them. The behaviors identified are:

- a. Use of terms - using terminology preferred by the group rather than accurate but different terminology.
- b. Communicating information - provides detail information about his or her part of the job to others within the system.
- c. Questioning - does not accept the conventional wisdom.
- d. High quality products - product has features which were not required but which make it more valuable to the user.

- e. Accepts challenges - assumes responsibility for tasks beyond scope of his or her job.
- f. Self starting - gathers information from various elements when in the system and uses initiative to discover which support services can be used in getting the job done.
- g. Risk taking - not affraid to make mistakes when taking on tasks for which he or she is not fully qualified.
- h. Concern for interface - insures that the product is completed in a form which allowed it to be used most affectively.
- i. Dependability - the product is on time and useful; serves the purpose for which it was intended.
- j. Team member - does not object to doing work beneath job status in an emergency

These ten behaviors served as basis for development of both measurement instruments.

The employee performance questionnaire is a twenty two item likert scale. The first sixteen items allow a supervisor to report how often a particular behavior was performed and the last six items allow the supervisor to report how well a behavior was performed. A summary of statistics derived from pre-treatment and post-treatment supervisor's questionnaires for both control and experimental subjects is presented in Table 3. An F test was performed using the .05 level of significance to determine if homogeneity of variance exists between scores from the two groups. The resulting

Table 2

Number of Supervisors Who Identified Each Behavior

Behavior	Supervisor								Total
	1	2	3	4	5	6	7	8	
Use of Terms				X					1
Communicating Information				X			X	X	3
Questioning	X								1
High Quality Products							X		1
Accepts Challenges			X						1
Self Starting					X	X			2
Risk Taking			X		X			X	3
Concern for Interference	X								1
Dependability	X				X				2
Team Member					X				1

Table 3

Summary of Descriptive Statistics from the Supervisor's Questionnaire

Group	Pre-treatment			Post-treatment		
	n	Mean	Standard Deviation	n	Mean	Standard Deviation
Control	28	87.3	11.1	28	90.1	13.1
Experimental	29	80.3	13.7	29	87.7	14.3

Table 4

Differences Between Individual Subjects Pre-Treatment and Post-Treatment Scores on the Supervisor's Questionnaire

Group	n	Mean of Difference	Standard Deviation	<u>t</u>	Significance
Experimental	29	7.38	12.3	3.17	$p < .01$
Control	28	2.79	13.7	1.05	n.s

value of $F(28, 27) = 1.52$ indicates that property does exist ($p < .05$). Differences between individual subjects pre-treatment and post-treatment scores are shown in Table 4. The experimental group showed a significantly great increase in post-treatment scores, $t(28) = 3.11$, $p < .01$ allowing the null hypothesis to be rejected. This result provides support for the research hypothesis that a structured group experience facilitates the transition from the role of college student to working professional. Analysis of the same scores for the control group indicated a non-significant increase in post-treatment scores, $t(27) = 1.05$, indicating that no other agent was operating which might have resulted in higher post-treatment scores by the experimental group. The difference between the gains of the two groups is shown in Table 5. The lack of significance ($p > .05$) between these gains causes support for the research hypothesis to be less conclusive than would be the case if the difference in gains were higher.

Table 5

Difference Between Experimental and Control Groups'

Pre-Treatment and Post-Treatment Scores

Supervisor's Questionnaire					
Group	n	Mean of Difference	Standard Deviation	t	Significance
Experimental	29	7.38	12.3	1.33	n.s.
Control	29	2.79	13.4		
Employee's Questionnaire					
Group	n	Mean of Difference	Standard Deviation	t	Significance
Experimental	29	1.28	3.44	2.30	$p < .05$
Control	25	-0.64	2.53		

The employee self appraisal questionnaire is a seven item likert scale, which allows subjects to report their self image on the dimension of learner/worker. A summary of statistics derived from pre-treatment and post-treatment scores for both control and experimental subjects is presented in Table 6 and Table 7. Homogeneity of variance between scores on comparison groups was verified, $F(26, 28) = 1.16$, $p < .05$. Differences between individual subjects, pre-treatment and post-treatment scores were not significant for the experimental group, $t(24) = 1.85$, $p > .05$. This result indicates that subjects in the experimental group did not perceive their employee

performance to be more professional after treatment, even though this performance was determined to be more professional by supervisors. Similarly scores by control subjects were not significantly different in post-treatment measurements and actually declined slightly. These results indicate that nothing in the environment seems to be operating which would increase an employee's perception of being a worker rather than learner.

Table 6

Summary of Descriptive Statistics from the Employee Questionnaire

Group	Pre-treatment			Post-treatment		
	n	Mean	Standard Deviation	n	Mean	Standard Deviation
Control	27	29.7	2.59	25	28.8	2.75
Experimental	29	27.9	2.40	29	29.2	3.00

Table 7

Differences Between Individual Subject's Pre-Treatment and Post-Treatment Scores on the Employee's Questionnaire

Group	n	Mean of Difference	Standard Deviation	<u>t</u>	Significance
Experimental	29	1.28	3.44	1.85	n. s.
Control	25	-0.64	2.53	-1.24	n. s.

Table 8

Difference Between Experimental and Control Group

Pre-Treatment Scores

Instrument	Experimental Group			Control Group			<u>t</u>	Significance
	n	Mean	Standard Deviation	n	Mean	Standard Deviation		
Supervisor's Questionnaire	29	80.3	13.7	28	87.3	11.1	1.94	n. s.
Employee's Questionnaire	29	27.9	2.40	27	29.7	2.59	2.65	$p < .02$

As shown in Table 8, the means of scores on both instruments were higher for the control group, than for the experimental group. This difference was not significant in the case of the supervisor questionnaire, $t(55) = 1.94$, $p > .05$. However, the control group pre-treatment scores were significantly higher than those of the experimental group, $t(54) = 2.65$, $p < .02$. This means that even though supervisors rated subjects in both groups in a comparable fashion, subjects in the control group perceive themselves as being workers to a greater extent than those in the experimental groups. Similar measurements were made using post-treatment scores and are shown in Table 9. Supervisors evaluations of subjects in both groups improved after treatment and this increase was greater for the experimental group than the control group. The difference between the scores of the two groups was not significant, $t(55) = 0.65$, $p > .05$. Subjects in the experimental

Table 9

Difference Between Experimental and Control Group

Post-Treatment Scores

Instrument	Experimental Group			Control Group			t	Significance
	n	Mean	Standard Deviation	n	Mean	Standard Deviation		
Supervisor's Questionnaire	29	87.7	14.3	28	90.1	13.1	0.65	n. s.
Employee's Questionnaire	29	29.2	3.00	25	28.8	2.75	0.50	n. s.

group rated themselves higher on the post-treatment test than those on the control group. Scores for subjects in the control group actually dropped slightly but the differences between scores in the post-treatment comparison scores was not significant, $t(54) = 0.50$, $p > .05$. However, the gain in scores by the experimental group was significantly greater than the decrease in scores by the control group, $t(52) = 2.30$, $p < .05$. This suggests that some factor caused pre-treatment scores on the employee's questionnaire to be artificially higher than post-treatment scores. One plausible hypothesis is that subjects did not fully believe assurances that questionnaire data would be kept confidential and attempted to create a favorable self image by their pre-treatment responses. A higher level of trust several months later may have resulted in responses which were more honest. This situation would explain lack of significant gain between pre and

post-treatment scores, but a significantly greater gain in scores of experimental subjects than those of control subjects. Distributions of differences between pre-treatment and post-treatment scores are shown in Figure 1 and Figure 2.

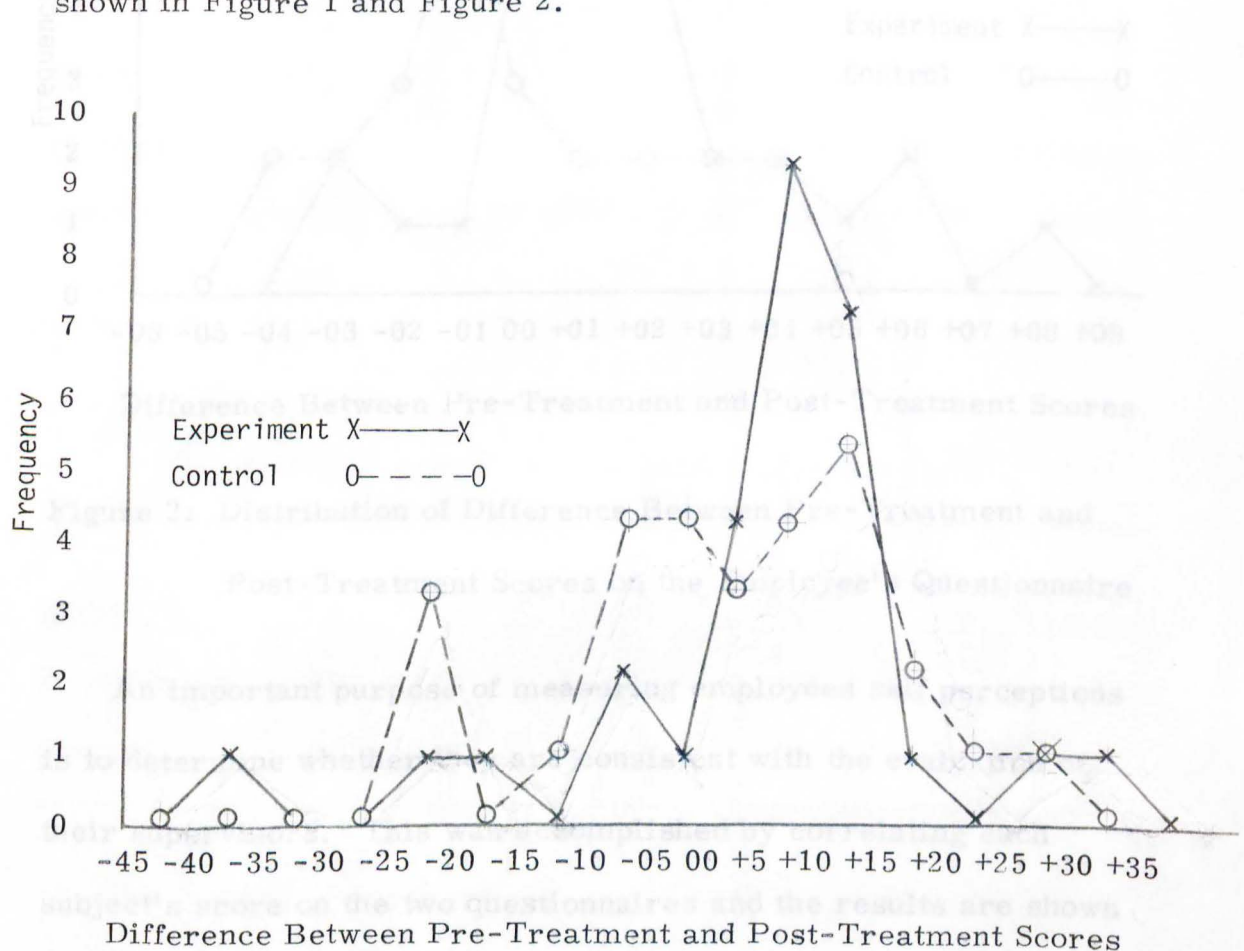
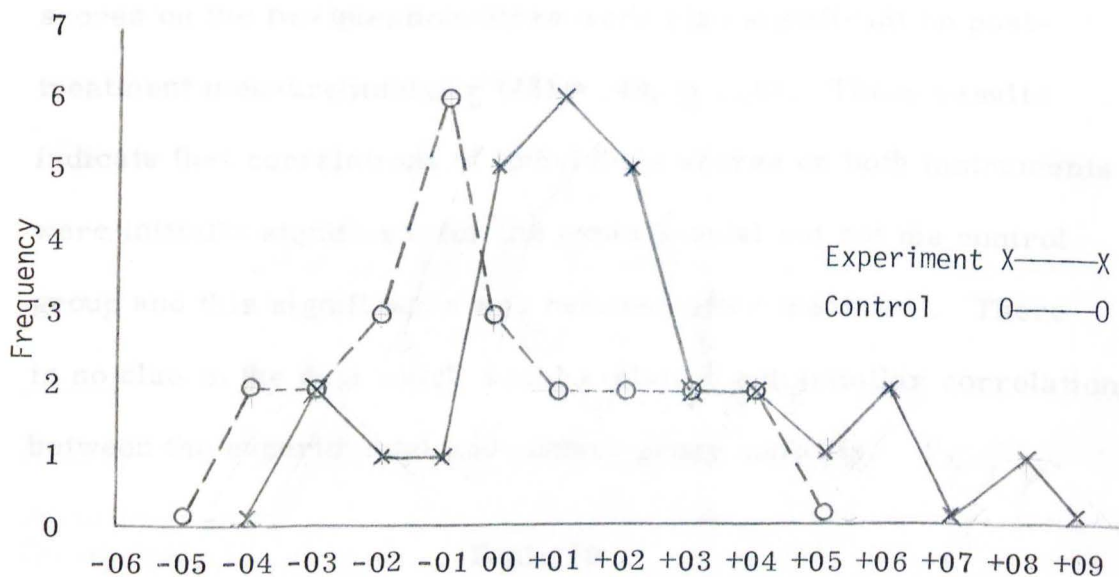


Figure 1. Distribution of Difference Between Pre-Treatment and Post-Treatment Scores on the Supervisor's Questionnaire



Difference Between Pre-Treatment and Post-Treatment Scores

Figure 2: Distribution of Difference Between Pre-Treatment and Post-Treatment Scores on the Employee's Questionnaire

An important purpose of measuring employees self perceptions is to determine whether they are consistent with the evaluation of their supervisors. This was accomplished by correlating each subject's score on the two questionnaires and the results are shown in Table 10. Pre-treatment scores for control subjects on the two instruments were not significantly correlated, $r(26) = .12, p > .05$ and post-treatment scores for this group on the two instruments were also not significantly correlated, $r(24) = .16, p > .05$. Correlations between experimental subject's scores on the two instruments were significant on the pre-treatment measurement $r(28) = .45, p < .02$. Correlation between experiment subject's

scores on the two questionnaires were also significant on post-treatment measurements, $\underline{r} (28) = .48$, $\underline{p} < .01$. These results indicate that correlations of individuals scores on both instruments were initially significant for the experimental but not the control group and this significance was retained after treatment. There is no clue in the data which would explain the dissimilar correlations between the experimental and control group subjects.

Table 10

Correlation Between Individual Subject's Scores
on the Supervisor's and Employee's Questionnaire

Group	Pre-treatment			Post-treatment		
	n	$\underline{r}$	Significance	n	$\underline{r}$	Significance
Experimental	29	.45	$\underline{p} < .02$	29	.48	$\underline{p} < .01$
Control	27	.12	n. s.	25	.16	n. s.

The validity of any measurement is limited by the reliability of the measurement instrument. For this reason, correlations between pre-treatment and post-treatment measurements on the control group were calculated. These calculations indicated that a moderate test-retest reliability exists for the supervisors questionnaire, $\underline{r} (28) = .38$, $\underline{p} < .05$. The employees questionnaire demonstrated a moderate to high test-retest reliability, $\underline{r} (24) = .55$, $\underline{p} < .01$. While these correlations imply only moderate test reliability, they seem to

be acceptable for the types of measurements being conducted. The data are presented in Table 11.

Table 11

Correlation Between Pre-Treatment and Post-Treatment
Measurement on the Control Group

Instrument	n	<u>r</u>	Significance
Supervisor's Questionnaire	29	.38	$p < .05$
Employee's Questionnaire	25	.55	$p < .01$

Table 12

Item Analysis of the Supervisor's Questionnaire

Part I				Part II	
Item	Correlation	Item	Correlation	Item	Correlation
2	.515	10	.582	1	.738
3	.657	11	.504	2	.775
4	.764	12	.602	3	.701
5	.623	13	.694	4	.628
6	.616	14	.505	5	.698
7	.694	15	.660	6	.740
8	.755	16	.598		
9	.573	17	.694		

An item analysis was performed on the Supervisor's Questionnaire and the results are shown in Table 12. Correlations between scores on individual items and the total score on the instrument yielded values between .504 and .775. Correlations on Part II of the questionnaire were generally greater than on Part I, indicating a higher reliability in measuring "how well" a behavior was performed than "how often" it was exhibited. The instrument seems to have an acceptable internal reliability with an alpha coefficient of $r = .931$. This statistic and the item analysis indicate that no changes are needed in the Supervisor's Questionnaire.

Table 13

Attrition of Employees Who Participated in the Program

	Experimental Group	Control Group
Number at the Program's Start	29	28
Number Employed Six Months Later	26	26
Loss	3	2

One indicator of the success with which individuals negotiate the transition from learner to worker is the attrition rate of new employees. During the five months from the initial taking of data to final data gathering five subjects voluntarily separated from the organization. Three of these subjects were in the experimental group and two were in the control group. These data are summarized in Table 13.

Summary

The results of data analysis indicate that we may reject the null hypothesis and conclude that a structured group experience will facilitate the transition of a person from the role of college student to working professional. Supervisors of subjects in the experimental group rated employees significantly higher after treatment and no significant increase in supervisors rating appeared for the control group during the same period. There was no significant increase in post-treatment scores on the employees questionnaire in either the experimental or control groups indicating that there is no support for the hypothesis that the treatment caused subjects to perceive themselves more as workers than learners. Significant correlations were found between subjects scores on both questionnaires in the experimental group indicating that some agreement exist between a supervisor and subordinate's perception of the individual as a worker. This was not true for correlations of the scores on the two instruments for the control group. No clue exists in the data to explain this discrepancy between the two groups on this dimension.

DISCUSSION

It is apparent from the statistical analysis that post-treatment scores in the experimental group increased significantly on the supervisors questionnaire and that the increase in post-treatment scores among control group subjects was not significant. These results allow us to reject the null hypothesis and accept the research hypothesis that a structured group experience has a beneficial affect on the transition being studied. In order to determine how confident we may be in rejecting the null, we must discuss the following factors in this study:

- o Adequacy of the instruments
- o Adequacy of the measurement process
- o Efficacy of treatment

Adequacy of the Instruments

The development of instruments was carried out in two phases: (1) conducting a needs assessment, and (2) developing questionnaires which accurately reflect the results of the needs assessment. The accomplishment of a valid needs assessment was a vital first step in the development of instruments. Since the criteria for change was based on supervisors evaluation of an employees performance of professional behaviors, it was imperative that valid behaviors be identified. The critical incident technique served as an excellent vehicle for this purpose. Interviews with eight supervisors not only resulted in the identification of ten desirable behaviors, but

seems to have exhausted the list of important behaviors which the interviewees could identify. As the interview progressed it became evident that the same behaviors were being repeated and that it was unlikely that new behaviors would be identified which could be endorsed by a consensus of supervisors. The repetitive identification of desirable behaviors added confidence to the validity of the list. Later, in explaining the program to supervisors of employees who would serve as subjects, no additions were suggested for the list although some supervisors objected to some of the ten items. This objection was usually based on a conflict with the supervisors own personal standards of professional behavior. Items such as "dependability" and "risk taking" seem to be contradictory unless the circumstances in which each of the behaviors performed were more specifically described. Perhaps the highest testament to the validity of the list was the comment by several supervisors that "...this list is just common sense; the sort of thing that all supervisors use without being told to use." This endorsement was very important in obtaining cooperation of supervisors in the program. Without it the problems sighted in the "adequacy of the measurement" section might have been impossible to overcome.

Although both the supervisor and employees questionnaires were used to measure change in subjects, the main affect to be tested was the supervisors evaluation of employee performance. The employees questionnaire was used to assess the amount of agreement between a

subject's perception of his or her performance, and the supervisor's assessment of that performance. For this reason discussion will focus on the supervisors questionnaire. As described earlier, the items on the supervisors questionnaire were devised around ten behaviors which resulted from the needs assessment. Although the ten behaviors represent a valid collage of criteria which supervisors as a group felt represent professional behavior, individual supervisors placed importance on just a few of these. This caused many supervisors to give evaluations using constructs on which they place little value or on which they had fuzzy operational definition. The intellectual non-investment in these low priority behaviors made it difficult to obtain either reliable or valid responses to these items. Although one of the objectives of treatment was to generalize skill mastery to all forms of achievement endeavor, the focus of treatment on developing one specific behavior made it unlikely that dramatic improvement in the other nine would occur and would be reflected in the supervisors evaluation. It is also possible that a subject may have chosen a behavior which was not highly valued by his or her supervisor. Lack of common values between supervisor and subject would make it doubtful that improvement in the target behavior would be reflected in the supervisors performance appraisal.

To overcome these drawbacks, there should be some agreement between supervisor and subordinate on a particular behavioral accomplishment which they both value and agree will contribute to

the employee's performance as a professional. After mutual agreement on goals, some form of measurement should be employed which focuses on the specific behavior to be mastered rather than on gain attributal to more general performance improvement, as is the case in the present instrument. The statistically significant results obtained using the supervisors questionnaire suggest that treatment was highly affective in spite the limitations of the instrument. Test-retest reliability on the supervisors questionnaire is moderately low even though statistical significance exists, $p < .05$. It is likely that a more reliable instrument would have provided stronger evidence of the efficacy of treatment.

Adequacy of the Measurement Process

The primary measurement in the study was the behavior of supervisors in completing questionnaires on employee performance. The supervisor's perception of employees performance can only be inferred from their responses on a questionnaire. For this reason it is valuable to consider any factors which may have caused these responses to produce errors of measurements. The manner in which one becomes a supervisor at GSFC is usually by demonstrating outstanding accomplishments in one's professional discipline and showing that he or she can be relied upon to get a job done well. Once these professional qualities are recognized, a person is given assistants and then subordinates in carrying out ever more complex tasks. During this process GSFC provides training in managerial

skills in order to equip the neophytes' supervisor to perform the new role which is being learned. The reward system for supervisors at GSFC is based heavily in favor of productivity, rather than personnel management. While each supervisor prides him or herself as being a good manager, great value is placed on being a "natural leader" rather than the product of formal management training. This climate provides a number of difficulties for an outsider who is attempting to implement a program to enhance employee productivity. Many supervisors consider the training provided by others to be a threat to their autonomy. They feel that their job is to mold a neophyte in their own image and they are concerned that this objective may be undermined by other people. This is particularly true of supervisors who believe that good leaders are born not made. They often exhibit a hostility toward the social sciences which interferes with their ability to cooperate in personnel development programs. Another difficulty in the measurement process was distaste on the part of some supervisors for formal personnel evaluations and evaluation systems. Many feel that they have a personal set of employee evaluation criteria and doubt the usefulness of evaluation systems imposed upon them by the organization. Some have had unpleasant experiences as a result of giving employees unfavorable evaluations and would rather not be involved in what could be a distasteful situation. Even though assurance had been given that evaluations would be confidential, some people were able to sight examples of ways in

which confidential personnel matters had been violated in the past and did not want to take the risk that this might happen again. Some supervisors may have resolved the dilemma of not wanting to participate in the program, yet not wanting to decline, by giving employees unusually favorable evaluations. This response allowed them to hedge the possibility that their evaluations might not be confidential and was a convenient way to address the dilemma of using performance criteria which they did not personally endorse.

Another limitation of the measurement process arose from the training activities. The intent of treatment was to have subjects choose a behavior which supervisors had identified as being indicative of professional performance. However, a minority of subjects insisted on choosing a behavior which had not been identified by supervisors, but which they felt were more relevant to their job setting. Since the supervisor's questionnaire was designed to only measure change in the target behaviors, it could not detect a change in other behaviors. Attempts to replicate this investigation should acknowledge some subjects' need to select a target behavior which is unique and the measurement process must be flexible enough to be valid for any behavior which is chosen. This could be accomplished by a process in which supervisor and subject agree upon a target behavior and define some objective measurement criteria before treatment.

These problems probably introduced measurement errors which made statistical results appear to be less significant. It is likely that a more valid instrument, and less error prone measuring process would cause the results of treatment to be more significant than were indicated by the present program.

Efficacy of Treatment

In spite of the flaws in measurement, it is evident that the program had beneficial results for the subjects in the experimental group. Members of this group were given higher performance evaluation than those in the control group, indicating that their supervisor considered them to be operating on a more professional level. Correlations of scores on the supervisors and employees questionnaires indicate a significant positive correlation between supervisors performance evaluation and subjects self-perception for both the pre-treatment and post-treatment measurements. Unfortunately, the same measurements on the control group yielded nonsignificant results before and after treatment. These discrepancies in scores indicate that some difference existed between the comparison groups before treatment. The control group pre-treatment scores on the supervisors questionnaire were higher than those of the experimental group, but not significantly higher. However, control group scores on the employees questionnaire were significantly higher than those of the experimental group before treatment. While the differences provide concern for the adequacy

treatment. While the differences provide concern for the adequacy of control in the experiment, they do not explain pre-treatment differences in instrument correlation between the two groups. The most likely explanation for this situation is that an improbable distribution of subjects caused those whose scores were more highly correlated to fall into the experimental group and those whose scores were less highly correlated to fall into the control group. This situation indicates that treatment cannot be claimed to increase the agreement between supervisor and subordinate on the level of the subordinates professional functioning.

There is reason to believe that the group experience resulted in a socialization process with beneficial aspects. Subjects tended to think of themselves as technical or administrative employees and had developed a number of myths and stereotypes about those in different disciplines which were dispelled as a result of being in the group. Members of each discipline incorrectly believed that merit promotions were more numerous in other fields. After some discussion on this topic a sense of total group cohesiveness developed and members began complaining about the entire pay system rather than favoritism shown toward some by the system.

Technical people traditionally experience frustration over delays in the procurement system and direct hostility toward procurement officers. After a discussion of problems experienced by everyone engaged in the procurement process, hostility seemed to shift away

from the people who must follow procurement regulations and was redirected toward the organization which makes the regulations. On a personal level, an accountant offered to help an engineer with advice on tax shelters, and a mathematician offered to give assistance to a management analyst with math problems in a graduate course in economics.

As a feeling of trust began to develop, some members felt that the environment was a safe one in which to share anxiety. One engineer initially questioned his participation in the program, claiming that his job performance was outstanding in every way. His only complaint was that superiors would edit his technical reports so extensive that he could not recognize them. At the end of treatment he acknowledged that his writing skills were poor and planned to enroll in a course on technical writing. Several subjects talked about problems that they have encountered with supervisors and were told that the supervisor was at fault. These experiences seem to be valuable in helping subjects negotiate the "reality shock" and provided insight into environments in other disciplines which many senior people never develop. The mutual sharing of experiences, both good and bad, provide a valuable basis on which an individual may negotiate a psychological contract with his or her supervisor.

The positive results which were observed as a result of this treatment are attributable to different parts of the three component

structure. The first of these components is the cluster of behaviors or critical incidents which were obtained by interviews with supervisors. New employees are highly motivated to succeed in a first job and will dedicate their energy to those activities which seem to make success likely. An employee's task is to identify the activities or behaviors which supervisors value and then learn how to perform these activities. The critical incident technique made the important contribution of providing criteria upon which supervisors measure success. Once these criteria were identified, subjects were able to make an investment in the workshop because they perceived a payoff if they could master the skills and behaviors needed for success.

The contribution of the second component of the workshop, achievement motivation, was to provide a way in which participants could master the skills needed to perform the behaviors which had been identified by the critical incident interviews. The fact that achievement motivation has been demonstrated to be affective in problem solving and structured approaches to goal attainment, reinforced the participants investment in the process. The step by step nature of the process coupled with the guidance of an "expert" and shared experience with peers provided an environment of support which facilitated a commitment to work.

The final component of this workshop, which identifies it as an experience for those in transition rather than a traditional educational experience, is the structure which was patterned after the Weiss

model. The "expert" provided information which was valuable to participants and lent credibility to the experience, thus inviting their participation. The primary function of the veteran was to provide validation for the information which was provided by the expert. The veteran was able to say "I have had these experiences and can vouch for the accuracy of the information which is being given to you." He or she also provides a calming assurance that those events and feelings being experienced by neophytes are normal and should be looked upon with curiosity but not alarm. Peer support of fellow subjects provides a "here and now" quality to the experiences that the veteran can talk about is but is not currently encountering. As organizational climates change, the challenges to new employees also change and the timeliness of peer support is most important. Part of the process of becoming a professional is to abandon the urge to compete with ones peers that often develops for successful college students and to begin the art of cooperation with colleagues which is the hallmark of a successful professional. The peer support component of the Weiss model encourages the socialization which results in cooperative rather than competitive interactions. In summary, the three components of treatment combined to provide an experience which is informative, challenging and reassuring to the new employee. The workshop points a direction to follow for success and gives a road map to show the way.

Generalization of Findings to Other Populations

In discussing the generalization of these results to other populations, it is useful to consider the three components of transitions postulated by Schlossberg (1978): (1) characteristics of the transition, (2) characteristics of the environment, and (3) characteristics of the individual.

The variety of transition for which this treatment might be useful seems quite broad. The treatment model was originally developed for individuals who were grieving over the loss of a mate but has been shown to be effective in this study for those beginning a professional career. Positive results in these two dissimilar transitions suggest a wide range of applications, for which the model might be effective. If the goals and content of treatment were made compatible with the needs of each new population, this treatment would be appropriate for many transitions associated with career change and career development.

In discussing different environments for which the treatment might be useful, it is important to consider the nature of the post-treatment climate. If we use McClelland's model to identify three categories of needs; achievement, affiliation, and power, treatment should be consistent with the dominant need associated with the new role being learned. Weiss' treatment for the bereaved address the need for affiliation while this study used achievement as a basis for activities which the group carried out. Group activities

must foster growth in those behaviors which are unique to the particular transition. For this reason, the treatment in this study should be considered for those transitions which are related to achieving goals and for learning goal attainment behavior. The specific behaviors to be developed would vary with each new environment, but the structure and the procedures could remain in tact.

In considering the types of individuals who might benefit from this form of treatment, one should review the data which are available. This study found that young college graduates were aided by this program in the transition from student to worker. Weiss found that a program with the same structure (but different content) was useful in helping people adjust to the loss of a mate. The success of this model with two very different populations suggest that it might be useful for other populations and that the more similar the population to those for which success was demonstrated, the more likely that beneficial results will be obtained. In summary, the Weiss model gives promise of being useful for a wide variety of transitions, the structure of the model need not be altered but the content and group activities must be tailored to the specific needs of each population.

Implications for Program Development and Further Research

There are a number of incentives to encourage an organization to adopt a program such as this. As the literature reviewed described,

two important ingredients in the process of a neophyte's "getting on board" are the socialization of the employee to the organization in a way which will allow him or her to learn the skills of being a worker, and the communication of how well the employee is succeeding in the attainment of this goal. This program provides an opportunity for an organization, through its supervisors, to establish criteria which workers must meet in order to be productive. The program can enable those workers who are "good fits" to focus on skills which will be most valuable to their employer and to their career. Those employees who are not immediately compatible with the organization can be identified early in the process and remedial efforts can be made to alter the employees behavior or allow the organization to change in a way that will allow the employee to become productive. The present program is likely to be more successful if some form of goal attainment scaling is used in conjunction with the present workshop format. This will allow each supervisor to clarify what criteria he or she believes are needed for employees success and clarification will speed up the negotiation of a psychological contract with the employee. In addition to this negotiation, the explicitly defined criteria for success will provide an opportunity for employees to monitor their progress toward behavioral goals and professional performance.

The results of this investigation allow several suggestions for further research to be formulated. First, the treatment program should be tested to determine its value as an aid to other career

transitions. Its efficacy should be assessed for those making the transition from one organization to another; for those affected by internal institutional reorganizations; and for those moving to new jobs within the same organization. Second, the program should be tried for people having various amounts of education as well as those of different ages and of different life stages. Its usefulness for middle age people entering the work force for the first time, as well as those starting careers should be investigated. Finally, a more sensitive method of measuring change should be developed. Some form of goal attainment scaling which focuses on a particular behavior which a supervisor and subordinate agree upon, might produce more valid measurement of change than the present instruments. This approach would eliminate the problem of evaluations being made which employ criteria not endorsed by the supervisor and not worked on by the subject.

CRITICAL INCIDENT FORM

A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.

1. What were the general circumstances leading up to this incident?
Was asked to perform a financial analysis.

APPENDIX A

2. Exactly what did this person do which demonstrated professional behavior?

She gathered information and made analysis without needing advice or referrals to proper people within the system.

Was a self starter.

3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?

Asked for procedure and direction.

4. What was the employee's job role? Financial Analyst

5. How long had the employee been on this job? 5 months

CRITICAL INCIDENT FORMAT

A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.

1. What were the general circumstances leading up to this incident?

Was asked to perform a financial analysis.

2. Exactly what did this person do which demonstrated professional behavior?

She gathered information and made analysis without needing
advice or referrals to proper people within the system.

Was a self starter.

3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?

Asked for procedure and direction.

4. What was the employee's job role? Financial Analyst

5. How long had the employee been on this job? 6 months

B. Think of a time when you observed a new employee performing a task in a manner which indicated to you that the employee was in a "learning" rather than "producing" mode.

1. What were the general circumstances leading up to the incident?

He was asked to do a job and did not go beyond the
boundaries of his own area of responsibility.

2. Exactly what did the person do which demonstrated "learning" rather than "producing" behavior?

Person did not understand the organization well enough
to implement the ideas which he came up with.

3. What behavior might the person have exhibited in order to make you feel that she/he was performing on a professional level?

Find out who in the organization could help him implement
ideas.

4. What was the employee's job role? Financial Analyst

5. How long had the employee been on the job? 2 years

CRITICAL INCIDENT FORMAT

- A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.
1. What were the general circumstances leading up to this incident?
A business emergency arises and subject is asked to do a job
for which s/he is not qualified totally.
 2. Exactly what did this person do which demonstrated professional behavior?
Subject produces product which meets specs and is on time.
 3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?
Subject continually asks for direction. Says that the task
is beneath his status level.
 4. What was the employee's job role? Personnel Officer Trainee
 5. How long had the employee been on this job? 6 months

B. Think of a time when you observed a new employee performing a task in a manner which indicated to you that the employee was in a "learning" rather than "producing" mode.

1. What were the general circumstances leading up to the incident?

Person was asked to help in a pinch and help group meet a task schedule.

2. Exactly what did the person do which demonstrated "learning" rather than "producing" behavior?

Person complained that the work was beneath her/him and wanted more sophisticated assignments.

3. What behavior might the person have exhibited in order to make you feel that she/he was performing on a professional level?

Do undesirable work and ask for more challenge when task is successfully completed.

4. What was the employee's job role?

5. How long had the employee been on the job?

CRITICAL INCIDENT FORMAT

A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.

1. What were the general circumstances leading up to this incident?

The new employee was asked to look into the design and testing
of a modification to part of an instrumentation system.

2. Exactly what did this person do which demonstrated professional behavior?

His proposed design, in addition to performing the obvious
basic functions required, was compatible with all interfaces -
noise to others, power, loading, etc.

3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?

Proposed a design performing the basic functions required
but not being completely compatible with other parts of the
system.

4. What was the employee's job role? Jr. Engineer

5. How long had the employee been on this job? 6 months

B. Think of a time when you observed a new employee performing a task in a manner which indicated to you that the employee was in a "learning" rather than "producing" mode.

1. What were the general circumstances leading up to the incident?

The new employee was asked to design an amplifier.

2. Exactly what did the person do which demonstrated "learning" rather than "producing" behavior?

The designed amplifier loaded down the following stages.

He had not considered the loading at the following stages
under realistic conditions.

3. What behavior might the person have exhibited in order to make you feel that she/he was performing on a professional level?

Checked out design under realistic conditions.

4. What was the employee's job role? Jr. Engineer

5. How long had the employee been on the job? 3 months

CRITICAL INCIDENT FORMAT

A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.

1. What were the general circumstances leading up to this incident?

A senior person left and there was no one to do the work.

He volunteered to take on the task.

2. Exactly what did this person do which demonstrated professional behavior?

Assumed responsibility for a task which was abandoned by a

higher grade person and completed job satisfactorily.

3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?

He would have avoided taking on the work.

4. What was the employee's job role? Jr. Engineer

5. How long had the employee been on this job? 2 years

B. Think of a time when you observed a new employee performing a task in a manner which indicated to you that the employee was in a "learning" rather than "producing" mode.

1. What were the general circumstances leading up to the incident?

A new task presented itself and it was offered to the
employee.

2. Exactly what did the person do which demonstrated "learning" rather than "producing" behavior?

He avoided taking on a new responsibility by claiming
that he was too busy. He appeared to be frightened.

He could only do one thing at a time.

3. What behavior might the person have exhibited in order to make you feel that she/he was performing on a professional level?

Assume continuously increasing responsibility and task
difficulty.

4. What was the employee's job role? Jr. Engineer

5. How long had the employee been on the job? 2 years

CRITICAL INCIDENT FORMAT

A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.

1. What were the general circumstances leading up to this incident?

Someone with a contiguous function asked for information
in order to affect his performance of his own job.

2. Exactly what did this person do which demonstrated professional behavior?

Provides expert information about his job which is unique
and needed by others. Considers the effect which his box
has on the whole system.

3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?

Does mostly listening and asks for information rather than
contributing information.

4. What was the employee's job role? Jr. Engineer

5. How long had the employee been on this job? 1 year.

B. Think of a time when you observed a new employee performing a task in a manner which indicated to you that the employee was in a "learning" rather than "producing" mode.

1. What were the general circumstances leading up to the incident?

Wants to discuss technical aspects of the job.

2. Exactly what did the person do which demonstrated "learning" rather than "producing" behavior?

Has difficulty using the terminology of the group.

Does not communicate well.

3. What behavior might the person have exhibited in order to make you feel that she/he was performing on a professional level?

Use the group terms rather than his own.

4. What was the employee's job role? Jr. Engineer

5. How long had the employee been on the job? 6 months

CRITICAL INCIDENT FORMAT

A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.

1. What were the general circumstances leading up to this incident?

He was given a task and instruction on how to perform
the task.

2. Exactly what did this person do which demonstrated professional behavior?

He asked this question. Why do we do things this way
rather than another way?

3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?

Either followed instruction religiously or asked for
more direction.

4. What was the employee's job role? Engineer Trainee

5. How long had the employee been on this job? 1 year

B. Think of a time when you observed a new employee performing a task in a manner which indicated to you that the employee was in a "learning" rather than "producing" mode.

1. What were the general circumstances leading up to the incident?

He was given a task and instruction on how to perform
the task.

2. Exactly what did the person do which demonstrated "learning" rather than "producing" behavior?

Either followed instruction religiously or asked for
more direction.

3. What behavior might the person have exhibited in order to make you feel that she/he was performing on a professional level?

He asked this question. Why do we do things this way
rather than another way?

4. What was the employee's job role? Engineer Trainee

5. How long had the employee been on the job? 1 year

CRITICAL INCIDENT FORMAT

A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.

1. What were the general circumstances leading up to this incident?

Asked to analyze cost factor on a job.

2. Exactly what did this person do which demonstrated professional behavior?

Did financial analysis completely and accurately and went

beyond job to make its value more useful than it was intended.

Always went 1 step beyond. Was asked questions by more senior people.

3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?

Asked for much help and did not complete on time.

4. What was the employee's job role? Financial Analyst

5. How long had the employee been on this job? 18 months

B. Think of a time when you observed a new employee performing a task in a manner which indicated to you that the employee was in a "learning" rather than "producing" mode.

1. What were the general circumstances leading up to the incident?

Trainee was given a simple but menial task and would not take initiative to seek information from others to complete.

2. Exactly what did the person do which demonstrated "learning" rather than "producing" behavior?

Could not produce a product. Did not have the work ethic.

Would talk theory but would or could not apply it. Work was beneath.

3. What behavior might the person have exhibited in order to make you feel that she/he was performing on a professional level?

Seek information and complete job quickly and go to others.

4. What was the employee's job role? Accountant

5. How long had the employee been on the job? 3 months

CRITICAL INCIDENT FORMAT

A. Think of a time when you observed a new employee performing a task which is usually performed by an experienced professional in the employee's field.

1. What were the general circumstances leading up to this incident?

Journeyman became ill and someone had to make a

complex presentation.

2. Exactly what did this person do which demonstrated professional behavior?

Presented complex information to senior people. On an

initiative, analyzed errors in data. Was assertive in

his technical position with doubting senior people.

3. How might a trainee have behaved in a similar circumstance which would have indicated less than professional behavior?

Ask for someone more senior to fill the gap.

Avoid taking responsibility.

4. What was the employee's job role? Engineer

5. How long had the employee been on this job? 1 year

Each item in this section describes a behavior which the employee may exhibit. Place an "X" in one of the five boxes to the right of each item under the column heading which best describes the extent to which the employee exhibits this behavior. Item one is a sample item. The supervisor has indicated that the employee is usually on time for meetings by placing an "X" in the second box from the left.

	ALMOST ALWAYS	USUALLY	SOMETIMES	NOT
Is on time for meetings		X		
Meets the requirements of a task satisfactorily				
Considers the needs of the person who will use the product s/he produces				
Considers how his/her task interfaces with other elements of the system				
Inquisitive and questions why things are done in the prescribed manner				
Accepts the prescribed manner of doing things yet questions it				
Projects enthusiasm and confidence when beginning a task				
Assumes responsibility for tasks greater than his/her official job description				
Communicates in language which is commonly used by others in the system				
Meets schedule commitments				
Requires little direction in the performance of a task				
Seek out sources of information within the system				
Will risk making a mistake in performance of a task				
Will perform tasks beneath his/her status in order to assist in a team effort				
Performs useful tasks beyond those which are required by his/her job				
Adds extra features to products which, while not required, are useful				
Provides more senior people with detail information about his job				

APPENDIX B

Supervisor's Name

Employee's Name

Part I Each item in this section describes a behavior which the employee may exhibit. Place an "X" in one of the five boxes to the right of each item under the column heading which best describes the extent to which the employee exhibits this behavior. Item one is a sample item. The supervisor has indicated that the employee is usually on time for meetings by placing an "X" in the second box from the left.

	ALMOST ALWAYS	USUALLY	SOMETIMES	NOT OFTEN	HARDLY EVER
1. Is on time for meetings		X			
2. Meets the requirements of a task satisfactorily					
3. Considers the needs of the person who will use the product s/he produces					
4. Considers how his/her task interfaces with other elements of the system					
5. Inquisitive and questions why things are done in the prescribed manner					
6. Accepts the prescribed manner of doing things, yet questions it					
7. Projects enthusiasm and confidence when beginning a task					
8. Assumes responsibility for tasks greater than his/her official job description					
9. Communicates in language which is commonly used by others in the system					
10. Meets schedule commitments					
11. Requires little direction in the performance of a task					
12. Seek out sources of information within the system					
13. Will risk making a mistake in performance of a task					
14. Will perform tasks beneath his/her status in order to assist in a team effort					
15. Performs useful tasks beyond those which are required by his/her job					
16. Adds extra features to products which, while not required, are useful					
17. Provides more senior people with detail information about his job					

Part II The items in this section are similar or identical to those in Part I, but you have been given a different set of alternatives from which to choose. As before, place an "X" in the box which most accurately describes the employee's performance.

1. Meets the requirements of a task
2. Considers the needs of the person who will use the product s/he produces
3. Provides expert information about his task to other parts of the system
4. Understands the management system well enough to use it
5. Capable of analyzing the operation of a system
6. Product meets specifications

MOST ACCEPTABLY	MORE THAN ACCEPTABLY	ACCEPTABLY	LESS THAN ACCEPTABLY	UNACCEPTABLY

form makes statements about your job and some attitudes which you may have towards it. The number to the right of each statement which you feel best accurately reflects your views.

The proportion of my time spent learning/working is

APPENDIX C

When given a job to perform, I feel that I can do it well

When given a task which I have not performed before, I am confident that I can learn to master it

When I need help from people outside of my organization, I can find the needed assistance

I consider myself to be a working professional rather than a trainee

I understand how the work which I do is needed and used by others in the organization

I feel confident in communicating information about my work to others in the organization

100/0	75/25	50/50	25/75	0/100
1	2	3	4	5
SOMETIMES RARELY	SOMETIMES OFTEN	SOMETIMES	USUALLY	ALMOST ALWAYS
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

NAME: _____ DATE: _____

This form makes statements about your job and some attitudes which you may have towards it. Circle the number to the right of each statement which you feel most accurately reflects your views.

1. The proportion of my time spent learning/working is

0/100	25/75	50/50	75/25	100/0
1	2	3	4	5
HARDLY EVER	NOT OFTEN	SOMETIMES	USUALLY	ALMOST ALWAYS
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

2. When given a job to perform, I feel that I can do it well

3. When given a task which I have not performed before, I am confident that I can learn to master it

4. When I need help from people outside of my organization, I can find the needed assistance

5. I consider myself to be a working professional rather than a trainee

6. I understand how the work which I do is needed and used by others in the organization

7. I feel confident in communicating information about my work to others in the organization

APPENDIX C: RESEARCH DESIGN

The purpose of this research is to determine which skills which supervisors think are important and to determine which will assist you in acquiring these skills. The research will seek to learn how you master skills while working and to determine a technique which you have found to be most suitable for your personal learning style.

APPENDIX D

I would appreciate it if you would participate actively and try to get involved in the sessions which take place.

We are going to meet in Room 5-314, Monday 10 a.m. to 12 noon, Monday and Wednesday for 2 weeks. Each of these sessions will be aimed at different stages in the learning of the skill of achievement behavior.

In order to determine which behaviors are valued achievement behaviors for professional trainees, a group of supervisors were interviewed. Each supervisor was asked to give their behaviors which s/he considers to be evidence that a recent college graduate was performing a professional role rather than a trainee role. The following list is a summary of professional behaviors which supervisors said are valuable and important and some examples of these behaviors.

SEMINAR ON ACHIEVEMENT SKILLS

The purpose of this seminar is to expose you to some skills which supervisors think are important, and to a process which will assist you in acquiring those skills. There are many ways to learn and master skills while each of you no doubt has a technique which you have found to be most suitable for your own personal learning style.

I would appreciate it if during the seminar that you would participate actively and try to get involved in the process which takes place.

We are going to meet in Room E-20, Building 11, from 10 a.m. to 12 noon, Monday and Wednesday for 2 weeks. Each of these sessions will be aimed at discrete steps in the task of learning the skill of achievement behavior.

In order to determine which behaviors are valid achievement behaviors for professional trainees, a group of supervisors were interviewed. Each supervisor was asked to state those behaviors which s/he considers to be evidence that a recent college graduate was performing a professional role rather than a trainee role. The following list is a summary of professional behaviors which supervisors said are valuable and important and some examples of these behaviors.

Behavior A: Use of Terms

Using terminology preferred by the group rather than accurate but different terminology; eliminates the need for translation.

Example of Behavior A: A new employee in an antenna design section was used to the phrase "an antenna absorbing energy at 100 MHz ...". His new associates would say "an antenna tuned to receive energy at 100 MHz..."

By conforming to the group's terminology, communications are more efficient and accurate.

Behavior B: Communicating Information

Acts as an expert and provides expert information about her/his part of the job; understands how her/his task affects the performance of the whole system.

Example of Behavior B: A program analyst devised a computer program which can predict trends in manpower expenditure for Center programs. She accurately and clearly described the model on which the program is based to project managers. She specified sources of error and their possible effect on the predictive accuracy of the model. Her information allowed others to determine the most effective way in which to use the information that the program provides.

Can you think of other examples of these two communications behaviors (A and B) which may occur in your work?

Behavior C: Questioning

Did not accept the conventional wisdom; asked why something was done a certain way; alert to find a better way to do things.

Behavior D: High Quality Products

Product has features which were not required, but which make it more valuable to the user.

Example of Behaviors C and D: An employee prepared a monthly financial analysis for a project. He realized that by adding a few steps to the process, a cumulative analysis could also be obtained which eliminated the need for a formal end-of-year summary analysis. The project manager could then anticipate how well the spending plan was going.

Can you think of other examples of Behaviors C and D which you may have observed in your work?

Behavior E: Accepts Challenges

Assumes responsibilities for task above her/his grade level. Jumps in when a job needs to be done.

Behavior F: Self Starting

Gathers information from various elements within the system; uses initiative to discover which support services are needed to assist in getting the job done.

Behavior G: Risk Taking

Not afraid to make mistakes; will take on a task for which she/he is not fully qualified.

Example of Behaviors E, F and G: A GS-12 Engineer completed the design of a command decoder on paper and then resigned for a better job.

An engineer who had graduated from college the year before directed a technician in the assembly, test, and qualification of the unit. To accomplish this, she had to:

- make arrangements with the electronics package design and manufacture section to have the unit built;
- prepare a test procedure for the technician;
- modify the design in order to have the unit meet its performance specifications;
- arrange to have the unit environmentally tested.

Can you visualize a situation such as this arising in your work setting?

Behavior H: Concern for Interfaces

Insures that her/his product was completed in a form which allows it to be used most effectively.

Example of Behavior H: An engineer designed a telemetry subsystem.

One of the functions of the unit is to send timing signals to two different instruments. The engineer learned that one of the instruments inverted the signals before using them. Since the signals were already available in the inverted form in the telemetry subsystem, she was able to send the most useful version to each instrument and simplify the overall system.

How important are interfaces in your work?

Behavior I: Dependability

Product is on time and generally useful; it serves the purpose for which it is intended.

Behavior J: Team Member

Does not object to doing work beneath her/his grade level in an emergency.

Example of Behaviors I and J: An engineering team developed an instrument power distribution system for a space telescope. At 4:30 p.m., the day

before the system was to be tested in thermal vacuum, it was discovered that a small cable harness was incorrectly wired. Since all of the technicians were going home, an engineer stayed and rewired the cable harness in order to allow the test to proceed on schedule.

How do you feel about this type of behavior?

The behaviors which we have just discussed are considered by supervisors to be indicative of a high achiever. High achievers are unique in many ways. One important part of their uniqueness is the way in which they think. Here is one example of a person who thinks like a high achiever.

In 1966, Jim Ryun, a University of Kansas sophomore, ran the mile in 3 minutes 51.3 seconds, over two seconds faster than any other human being in history. Overnight Jim Ryun was famous in every country in the world. He earned the world's admiration for less than four minutes of running. However, his success, unlike his new fame, had not come overnight. For years Jim had been practicing hard, getting up at five o'clock every morning for a six mile workout, the first of two workouts every day. Jim Ryun was a lonely figure those

grey, cold morning hours and pain from running hard was hard to take, but Jim kept running, practicing, working hard to achieve a unique position in track history.

Many people have asked how he could keep up the practice in spite of the cold, in spite of the pain and the loneliness. What kept him going? What was he thinking all those early mornings while he was running? No one will ever know what all of his thoughts were, but he has told reporters some of them.

As Jim runs he is looking ahead to track meets with runners from other parts of the United States and from different countries in the world. He knows he must practice hard to beat them. Then there is the impersonal clock. Will he be the first human being in history to run a mile in less than 3 minutes and 50 seconds? Perhaps he will if he continues to practice and improve. Jim thinks about many things he wants: to beat his previous time, to beat other milers in competition, to be a world record holder, and above all, to continue running for as many years as he can.

Jim thinks about other things too, while he is running. He thinks about competing against the Russians and beating them. He thinks about bringing the world record for the mile run into the United States for the first time since it was held by Glen Cunningham in 1934, and keeping it here. He also thinks about the possibility that he may lose if he doesn't get better. Those are the worst feelings, and those fears make Jim try even harder during practice and during the races. He wants to stay the best miler as long as he can.

When success came, Jim had not things to think about. Just these. These are some of the things Jim thinks about as he runs during those early hour mornings. Also, he is thinking always about specific goals. For each year, Jim and his coach, Mr. Timmons, set out their goals for the quarter mile, half mile, mile, and two mile runs. And they set up daily running goals. Jim keeps track of his daily progress on 3" x 5" cards. The thought of these goals, what will be on those cards and the record books, helps him when the pain becomes unbearable. He knows he must break through the fatigue barrier. So long as he keeps improving, the pain he must endure seems worthwhile. He just won't let anything stand in his way. When the weather is bad, Jim always thinks of some other place to run inside. When there are difficult problems, like the time he got a virus just before the Olympic

Games in Tokyo, there is always Coach Timmons to provide expert advice and encouragement. For example, Jim is not husky. He is 6 feet 1 1/2 inches tall and weighs 155 pounds. Coach Timmons recommended weight lifting and calisthenics to increase his muscle, strength and stamina. This help, and Jim's own determination to keep to his daily practice schedule have been very important in his success.

When success came, Jim had new things to think about. First there were all the invitations to be on television, all the autographs to sign, all the telegrams of congratulations to read. It seemed that he just didn't have any more time to himself. He still wanted to spend some time with his girl friend and his family. However, neither these pleasures of success nor the new difficulties were as important as his pride and satisfaction that at last he was the new world record holder.

These are things Jim Ryun thinks about. This is the kind of thinking which has helped make him the world's fastest miler. To be precise, Jim has 10 important kinds of achievement thoughts. In the following pages you will have a chance to learn what these ten types of

achievement thoughts are. You will have the chance to practice them and to apply them to your own life. If you think these kinds of thoughts as much as Jim Ryun does, you will find that you will begin acting differently and achieving more.

Here is another story with the ten different kinds of achievement thoughts.

- ¹For a long time Joe had wanted to become a commercial airline pilot.
- ²But he was not confident that he could complete the difficult training program and meet the high standards.
- ³And he didn't have enough money to go to flight school.
- ⁴He talked to airline pilots, and they told him that as his skill improved, his confidence would grow.
- ⁵Encouraged by what he learned from them, he borrowed money from his uncle so that he could pay for flight school and the right kind of training.
- ⁶He knew that if he made it, he would live well and travel widely.
- ⁷But if he didn't make it, he would probably lead a humdrum life.
- ⁸From past experiences he knew how bad failure felt.
- ⁹Then, after some initial successes in flight training, he also knew how satisfying it was to succeed.
- ¹⁰Joe worked hard for the next five years--learning to fly better and competing with others for the chance to fly the first commercial supersonic jet.

ACHIEVEMENT IMAGERY (AI)

"ACHIEVEMENT IMAGERY" thoughts show a desire for excellence. Competing with others shows a desire for excellence. Trying to improve oneself shows a desire for excellence. Trying to do something unique, or working at something for a long time shows a desire for excellence. Each of these types of achievement imagery (AI) has a special name.

- a) competition with others (CO)
- b) competition with self (CS)
- c) unique accomplishment (UA)
- d) long term involvement (LTI)

Achievement Imagery is the most important kind of achievement thinking.

SUCCESS FEELINGS (SF)

When high achievers succeed, they have many SUCCESS FEELINGS (SF). They may feel pride, happiness, enjoyment, satisfaction, etc. The positive feelings high achievers have after they succeed are SF.

FAILURE FEELINGS (FF)

High achievers don't always succeed. Because they choose challenging goals, sometimes they fail. If they fail, they have FAILURE FEELINGS (FF). For example, a person might feel discouraged at expecting a C on an examination. "Judy feels disappointed when she learns she hasn't made the Varsity." "Ronald felt like an outcast, an inferior, when he didn't do as well as the rest of the class." All of these feelings are Failure Feelings. However, when high achievers have such defeat feelings, they try to figure out how to do better. They don't quit.

FEAR OF FAILURE (FOF)

FOF occurs when people do not reach their goals and feel badly afterwards. Before the results are in, high achievers also think about the possibility that they might fail. They know there is always a chance they might not succeed. When they anticipate failure, or try to imagine what it will be like to fail, they are having FEAR OF FAILURE (FOF).

Here are some FOF examples: "Mary is afraid she won't pass the examination." "Jack suspects that his car will not run perfectly after

he fixes it." "Peter realizes that he may not win the swimming race." These thoughts are about possibilities in the future.

HOPE OF SUCCESS (HOS)

The difference between FF and FOF is this: FF is how you feel after you have failed. FOF is anticipating possible failure, and thinking how bad it will be. SF is how you feel after you have succeeded. HOPE OF SUCCESS (HOS) is how you feel and what you think about the possibility of success in the future. HOS are happy dreams of success.

ACTION (ACT)

For high achievers, success very seldom comes by chance or good luck. In fact, what high achievers like most is a challenge. To succeed in reaching challenging goals takes long hard work and planning. High achievers plan out the ACTIONS in advance and take the actions they need in order to achieve their goals. We call this kind of achievement thinking ACTION thinking (ACT).

HELP (H)

People with a high need to achieve like to do things themselves, but often they seek the advice and aid of experts to help them do better. In the story about Joe, he talked with airline pilots because he was worried about his low self confidence. The pilots gave Joe some advice: "Practice hard, and as you improve, your confidence will grow." Getting expert advice or help, and thinking about the advice of experts are achievement thoughts. We call them HELP thoughts (H).

WORLD OBSTACLES (WO)

When high achievers are trying to get ahead, usually some things get in their way. Often these blocks to success are outside the person. They are WORLD OBSTACLES (WO). For example, lack of snow is a WO for a skier. Not having enough money is a WO to a student who wants further education. A mechanic without adequate tools faces a WO. People with a high need for achievement think about WO and try to find ways of overcoming them through action and help. World obstacles do not make the high achievers give up or become discouraged. They see them as challenges; as chances to conquer difficulties.

PERSONAL OBSTACLE (PO)

Sometimes WO make it difficult for a high achiever to accomplish what he wants. But frequently what stands between a high achiever and the goal is a personal shortcoming, or a PERSONAL OBSTACLE (PO). For example, a person may not have enough knowledge, or the right skill, or he may lack self-confidence. All of these obstacles to getting ahead are inside the person. They are all PO. High achievers think about their PO so that they can take the right actions to overcome them. In this way, high achievers proceed toward their goals.

NEED (N)

It is not enough to know what kind of excellence you desire. It is not enough just to say that you want something. High achievers deeply want or need what they work for. NEED (N) thoughts are always about genuinely wanting something. High achievers know what they want and they know how much and how deeply they want to achieve excellence.

SUMMARY OF ACHIEVEMENT THOUGHTS

ACHIEVEMENT IMAGERY (AI) - Desire for something excellent

Competition with others (CWO)

Competition with self (CWS)

Unique accomplishment (UA)

Long term involvement (LTI)

All 4 types of AI
show a desire for
excellence.

SUCCESS FEELINGS (SF) - Good feelings after success

FAILURE FEELINGS (FF) - Bad feelings after failure

FEAR OF FAILURE (FOF) - Worry about possible failing

HOPE OF SUCCESS (HOS) - Expecting success before it has been achieved

ACTION (ACT) - Plans and actions taken to achieve goals

HELP (H) - Help given to high achievers to reach excellence

WORLD OBSTACLE (WO) - Blocks in the world which stand in the way of success

PERSONAL OBSTACLE (PO) - Blocks in the person which stand in the way of success

NEED (N) - Deeply wanting to achieve excellence

Procedure on Mastering Achievement Behavior

Choose a skill which you want to master or one at which you hope to become more proficient; one which will enhance your achievement behavior. Some useful categories are:

- technical competence
- organizational understanding
- communications
- system performance

Make your goal modest enough that it's attainment is realistic. If you need help in choosing a skill, ask your supervisor which behavior would be most appropriate to focus on. You are about to write a short story. The story should be written in the past tense and is to be a fantasy; a fairy tale. The story will have ten sentences and the structure of each sentence is given. Now, proceed to write the story.

- N 1. Write a sentence expressing your wish to master this skill.
- PO 2. Write a sentence describing personal obstacles which stood in your way.
- WO 3. Write a sentence describing world obstacles which stood in your way.
- H 4. Write a sentence describing the way you obtained help to overcome obstacles.

A 5. Write a sentence describing what actions you took to achieve the objective.

HOS 6. Write a sentence describing the hope of success you experienced.

FOF 7. Write a sentence expressing fear of failure to achieve your objective.

FF 8. Write a sentence describing how you would have felt if you had failed to achieve your objective.

SF 9. Write a sentence describing how you felt when you achieved your objective.

AI 10. Write a sentence describing the desire for excellence you felt in this achievement activity.

1. What type of AI did your story contain?

CO Competition with others _____

CS Competition with self _____

UA Unique accomplishment _____

LTI Long term involvement _____

2. Is this something you want very much?

3. Are there any other PO or WO that you can think of?

4. What other ACT might you take?

5. How else might you get H?

6. How else will you feel if you succeed? or fail?

7. What else will happen if you succeed? or fail?

Now that you have experienced achievement thoughts in the form of a fantasy, you are ready to plan an action program which will help you master some achievement behavior. Choose a skill which you want to master. It may be the same as the skill used in the fantasy or you may choose another. Follow the steps in the action program which follows:

1. Describe in detail the achievement behavior which you want to master.
2. Describe personal obstacles which stand in your way.

3. How will you obtain help in overcoming these obstacles?
4. Describe world obstacles which stand in your way.
5. How will you obtain help in overcoming these obstacles?
6. Construct a time line which portrays the sequence and time required to accomplish your task.
7. Take first the action needed to obtain help in overcoming obstacles.

You have now learned how to think and act as high achievers think and act. You have mastered the skill of achievement behavior. Frequent use of this skill will allow you to be a lifelong high achiever.

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