EXISTENCE AND RELEVANCE OF MENTORING RELATIONSHIPS AMONG ADMINISTRATORS OF HOME ECONOMICS AND ENGINEERING

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TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

CHAPTER I

INTRODUCTION

Through each stage of one's professional career, certain individuals serve as mentors. These people help upwardly mobile professionals release their potential through nurturing, encouraging, caring, and listening. A mentor encourages an apprentice to develop fundamentals needed for current and future assignments and situations through instruction, demonstration, and practice. An effective mentor places issues in perspective so that individuals are able to assess a situation, examine advantages and disadvantages, and make decisions that are timely and realistic.

Research in business (Hennig and Jardim, 1977a, 1977b; Kanter, 1977) and in education (Almquist and Angrist, 1971; Bernard, 1964) has demonstrated that mentoring relationships are frequently formed by beginning professionals with older, more established professionals. These relationships help shape a young professional's commitment to a profession and/or influence the individual's choice of a profession (Bragg, 1976). Although career advancement depends primarily on the skills and abilities of professionals, the politics of career advancement include more than the mastery of the technical aspects inherent in a job. The mentoring relationship has been described as one way for young professionals to obtain support in an organization and to learn the implicit and explicit ways in which the organization functions.

Although the concept of mentoring is an ancient one, only recently has the importance of this relationship in career development and success been recognized. In an extensive study, Yale psychologist Daniel Levinson (1978, p. 97) concluded that the mentor relationship is "one of the most complex and developmentally important relationships a man can have in early adulthood" and the lack of a mentor may be a major developmental handicap.

Every organization is different and each one makes different demands on an employee. Each one also has its own environment within which the employee will have to function, and that environment must be understood in terms of limitations, stimuli, personalities and resources. Without an awareness of these factors and the insight necessary to properly interpret them, one is not likely to achieve success within the organization.

Widely accepted management theory today indicates that an individual cannot succeed alone inside the organization, no matter how good the technical skills, abilities, performance, or stamina. The quality of work is important, but the willingness of people in key positions to support an aspiring administrator or manager, counsel with the person and provide inside information is the key to an individual's success. An unstated but widely-known fact is that promotion and high-level jobs are frequently filled on the basis of personal relationships effected through mentor situations (Cook, 1979).

While there is considerable evidence that men, for some years, have benefited from mentor relationships, the reward for women has only recently been investigated and reported. Some research in business has found women to be either unaware of the informal organization

(Hennig and Jardim, 1977a, 1977b) or not involved in collegial or mentor relationships to the same extent as men (Epstein, 1970). Similar studies in academia have found that although women have identified mentoring relationships (Benton, 1980; Fowler, 1982; Picker, 1980), the rate of such relationships has remained negligible (Benton, 1980; Picker, 1980).

According to Cartter and Ruhter (1975) and Bayer and Astin (1975), discrimination against women in initial job placement in academia has disappeared; however, the fact remains that career advancement of women depends primarily on peer review within academic departments and schools, and further research indicates that with increasing time in the organization, discrimination or exclusion from informal networks is more strongly felt (Ekstrom, 1979; Fowler, 1982). Therefore, an important test of true equity is whether women with the same qualifications and accomplishments as men are advanced and remunerated in an equitable fashion throughout their professional careers (Cartter, 1976). The presence and quality of a mentoring relationship may be a determining factor.

Administrators in home economics have long dealt with the unusual and often sensitive situations unique to women, so they have been required to develop the necessary abilities for coping in the male dominated administrative arena. From the beginnings of the profession, female administrators have provided strong role models for those dynamic women who followed in their wake (Rose, 1947). Home economics history possesses a wealth of information about these exceptional administrators and the support they so willingly provided their successors.

With such a rich heritage, home economists find themselves in a unique situation whereby mentor relationships could readily be extended. The knowledge and expertise possessed by home economics administrators provides a sound base from which aspiring administrators may learn.

Statement of the Problem

At present there is a critical lack of systematic evidence on mentoring relationships for women in higher education, especially in view of the perceived importance of these relationships in the development of a professional identity and in career advancement. Because home economics is a female intensive profession, it is vitally important that administrators within the profession become aware of this unique relationship and identify and sponsor fast-tracking, capable women in order to prepare them to cope successfully. In addition, home economists who hope to succeed in administration must seek out and cultivate relationships that will encourage experienced administrators to sponsor them for managerial posts.

The purposes of the study were to determine the presence and characteristics of mentoring relationships among administrators of home economics units in higher education (a basically human-oriented profession dominated by female administrators), and to determine the perceived importance of the relationship in one's advancement within higher education administration. In order to further investigate the situation and to determine whether this relationship was typical, administrators in colleges of engineering were selected to provide a source of comparison. Engineering is a technically oriented profession dominated by male administrators, so it was believed that differences might occur between these two groups.

Objectives of the Study

The specific research objectives which evolved from the major purposes of the study were to determine whether responses of home economics administrators were different from those of engineering administrators

1. in terms of the number of past and present mentoring relationships;
2. in regard to characteristics of the mentoring relationship;
3. with respect to the perceived importance of mentoring relationships in one's advancement within higher education administration.

Limitations of the Study

The study was limited to administrators in Colleges of Home Economics (or its equivalent) and Engineering in land-grant institutions with a 1981-82 total enrollment of over 15,000. Only those institutions with both Colleges of Home Economics (or its equivalent) and Engineering were included. Only those individuals holding a permanent title of dean, associate dean, department head, or equivalent were asked to participate in the study. No attempt was made to distinguish between those individuals who were trained within home economics and those who came into administrative positions within home economics or engineering from related subject areas.

Definition of Terms

The following are definitions used in the study.

Apprentice: A beginner, a learner; one who is affiliated with a mentor.

Department Head: Regarded primarily as a member of the administrative team, this person is, in fact, the "load bearing point" in the overall academic administrative structure. Because he/she is an administrator primarily and has a functional relationship to other administrators, he/she can usually be more effective than a chairperson in getting things done for a department, its people, and its program (Kamm, 1980).

Mentor: A wise and trusted teacher; one who helps to equip an apprentice for larger responsibilities through the assignment to progressively more difficult and responsible positions. A mentor may or may not be a sponsor; ideally he or she will be.

Protege: One whose welfare, training, or career is promoted by an influential person; one who is affiliated with a sponsor.

Sponsor: One who possesses the power to bring about job enrichment, promotion, or goals sought for career advancement; one who vouches for the suitability of a candidate for admission. A sponsor is not necessarily recognized as a mentor, although sometimes a mentor and sponsor are the same person.

Organization of the Study

The study was organized into five chapters. The first chapter included a statement of the problem to be investigated, a brief description of the importance, justification and limitations of the study, and specific objectives for investigation. A review of the literature pertinent to the research is discussed in chapter two. Chapter three includes a description of the methods and procedures followed in the study. Results of the study and a discussion of the findings in

relation to the published literature are presented in the fourth chapter, and chapter five contains a summary of the study, implications, and suggestions for future study.

CHAPTER II

REVIEW OF LITERATURE

Thousands of people working their way up the corporate ladder are receiving an informal education on both internal politics and their own business environment through the mentoring relationship. This relationship has been described as one way for the upwardly mobile professional to obtain support in an organization and to learn the implicit and explicit ways in which an organization functions. It is recognized as vitally important to the ultimate success of the upwardly mobile executive (Cameron, 1978; Fowler, 1982; Spilerman, 1977).

Although this study involves mentoring within higher education administration, the mentoring relationship as evidenced in the realm of business and industry is clearly applicable to higher education. Therefore, this chapter includes a review of the existing literature relevant to mentoring relationships throughout both business and education.

Theoretical Development

Much has been theorized concerning the way in which individuals are socialized into their professions (Bragg, 1976; Bolton, 1980; Clark, 1972; Katz, 1979; Parsons and Platt, 1973). Bragg (1976) suggested that socialization is a continuous, social learning process which leads to a sharing of value patterns between the person being

socialized and the socializing agent. The aim of professional socialization is the development of a professional identity and ultimate career development (Parsons and Platt, 1973). Often the process takes place during educational development but occasionally it occurs during the early years of a professional career.

Clark (1972) identified four key elements in the socializing process: professional education programs that are highly goal-oriented with a high level of value consensus among the faculty, programs with structures and elements consistent with the program goals, identifiable and assessable role models who give both formal and informal feedback, and professional education programs which foster the development of student subcultures supporting the development of professional autonomy. Although merit is the primary criterion for career advancement, numerous studies indicate that while merit is part of the picture, social selection on any number of ascriptive variables plays a role in selection for initiation into a profession (Blackburn, Chapman and Cameron, 1981; Crane, 1965; Granovetter, 1973; Hennig, 1970; Kanter, 1977; Reskin, 1979). Within the literature this process of initiation has been termed mentorship.

Granovetter (1973) developed his theory on the process of mentoring by studying career contacts in obtaining a position in academia. His theory correlates professional network contacts with career success. Blackburn, Behymer and Hall (1978) supported Granovetter's hypothesis by showing productivity to be significantly correlated with the number of personal contacts with others in and out of the professional environment. A 1981 study by Blackburn, Chapman and Cameron provided additional support confirming that more productive mentors

were associated with greater numbers of apprentices, who were in careers essentially identical to their own, than mentors who had fewer apprentices.

Crane (1965) singled out research training by attentive mentors as an important factor in the productivity of scientists, while both Hennig (1970) and Kanter (1977) supported this relationship in the development and career success of business executives. Bolton (1980) found mentoring to be a significant factor in overcoming traditional socialization barriers to women, while Holt (1981) theorized that mentors, both male and female, may be the single most important factor in the career development of administrators.

Mentoring

For centuries the concept of mentoring has been an accepted route toward success, however not until the last 15 to 20 years has attention been focused on this process in regard to professional mobility. Studies show the crucial influence of mentors in shaping the personal lives and professional careers of those in leadership roles (Klopf and Harrison, 1982). Regarded as "one of the most complex and developmentally important relationships a man can have in early adulthood," no word currently in use is adequate to convey the nature of this unique relationship (Levinson, 1978, p. 97).

Mentoring may be likened to parenting. Both imply nurturing but, as in parenting, much is taken for granted (Noller, 1982). It is usually assumed that the one who is providing the mentoring is an expert at it, by virtue of his/her being chosen the mentor or by assuming the responsibility of the mentorship.

A mentor is defined as "a wise, loyal adviser" (Woolf, 1977). The word originates from Greek mythology. In Homer's The Odyssey, Ulysses chose Mentor as the guardian of his son Telemachus, before embarking on a 10 year journey. Ulysses' son was advised, counseled, loved, and taught by Mentor during his father's absence. From this beginning reference, the term "mentor" has come down through the years to mean guardian, guide or teacher (Noller, 1982).

One of the earliest references to mentoring discussed it as a form of leadership training, describing the mentor in the role of a leader as "an ambiguous authority figure" (Stodgill, 1968). Recently, however, more is being reported on the advantages of and, in fact, the necessity for upwardly mobile professionals to establish mentoring relationships with successful persons who take aspiring young candidates-for-success under their wings by becoming career guides and executive nurturers. Bolton (1980) reported on the mentoring relationship stating that,

> The mentor, like a role model, demonstrates how an activity is to be performed and can enhance the learning experience . . . in addition to being a role model, the mentor acts as a guide, a tutor or coach, and a confidant (p. 195).

The term further implies the process by which a future manager/administrator is informally trained by his or her immediate superior (Herbert and Yost, 1978). Levinson (1978) recently expanded on the definition of mentoring, suggesting that this relationship is not defined in terms of formal roles but rather in relation to the quality or nature of the relationship and the function it serves. He identified six mentoring functions: 1) teacher, who enhances the skills and intellectual development of the young person; 2) sponsor, who uses influence to facilitate the young person's entry and advancement;

3) host and guide, who welcomes the initiate into the new occupational and social world, and acquaints the initiate with its values, customs, resources, and cast of characters; 4) exemplar, who serves as a model that the young person admires and seeks to emulate because of his or her virtues, achievements, and way of living; 5) counselor, who provides advice and moral support in times of stress; and 6) realization of the dream, who helps to define the newly emerging self by supporting and facilitating the young person's dream, believing in the person and by giving the dream his or her blessing. A mentor is a very special person in an individual's career development; a teacher who is also a friend, a respected counselor and guide, one who provides discipline, guidance and advice and who often develops personal concern for the apprentice and a feeling of responsibility for assessing him/her (Halatin, 1981).

Mentor Versus Sponsor

A mentor may or may not be a sponsor; ideally he or she will be (McLane, 1981). A sponsor possesses the power to bring about job enrichment, promotion, or other goals sought near-term for career advancement; one who vouches for the suitability of a candidate for admission (Herbert and Yost, 1978; Josefowitz, 1980; The Woodlands Group, 1980). A mentor, on the other hand, may not even be positioned to recommend someone for a new job. He or she does play a vital role in career advancement, however, by helping to equip the apprentice for larger responsibilities through the assignment to progressively more difficult and responsible positions (Herbert and Yost, 1978). A sponsor then has a protege, one who's welfare, training, or career is promoted by an influential person, while a mentor has an apprentice,

a beginner, a learner, one who's opportunity for advancement is improved through the aid and guidance of an adviser (Josefowitz, 1980).

The primary difference between sponsor and mentor is one of function. A mentor will teach a skill or provide the knowledge necessary to perform an identifiable task. He/she may or may not possess "clout" in the particular organization, but focuses attention on the present, teaching what the apprentice needs to know now (Josefowitz, 1980).

A sponsor, on the other hand, may or may not be in the position, for several reasons, to teach the protege about his/her job. However, he/she can help advance the protege's career by recommending him/her for special projects, by speaking up for the individual, by taking him/her along on assignments. Sponsors are a source of endorsement, or of inside information about the institution. They focus on the future and must have influence in the system or organization (Josefowitz, 1980; Kanter, 1977, 1979b; Schmidt and Wolfe, 1980). Epstein (1970) noted that the sponsor/protege relationship is a reciprocal one because the protege facilitates the sponsor's transition to retirement by providing some assurance that the sponsor's work will be continued in the future. This type of relationship can help to maintain continuity of personnel within an organization. Within some professions such as social work, the sponsor/protege relationship is actually built into the professional training experience (Inana, 1981).

Characteristics of the Mentor

Numerous writings have attempted to identify exactly who makes a good mentor. Among the identified characteristics have been the

possession of knowledge which is needed; the willingness to share expertise (Halcomb, 1980; Hyatt, 1979; McLane, 1981); the ability to listen, to guide, to inspire, and to encourage a higher degree of attainment (Lea and Leibowitz, 1983; Wallinga, 1982). Herman (1980) identified specific qualifications of the mentor, including personal competence, confidence, desire to mentor and recognition of reciprocity in the relationship. (Arbetter (1980), in his study of mentoring among psychotherapists, cited acting as a professional role model and acceptance of the apprentice as a person as important characteristics. The mentor must be willing to give time and attention, since the relationship parallels the function in importance (Schmidt and Wolfe, 1980).

Levinson (1978) suggested that the mentor usually represents a mixture of parent and peer.

> If he is entirely a peer, he cannot represent the advanced level toward which the younger man is striving. If he is very parental, it is difficult for both of them to overcome the generational difference and move toward the peer relationship that is the ultimate . . . goal of the relationship (p. 99).

In a 1979 study conducted by Grote and Stine ("Mentors Seen as Key Allies," 1980), characteristics fell into three categories:

1) Personal - a good mentor is perceptive and open, personally successful and outstanding in expertise.
2) Position - he or she has high status in the organization and the right contacts.
3) Process - good mentors are open to disagreement and skilled at encouraging growth and risk-taking (p. 107).

Lastly, McLane (1981) noted that those who actually had mentors emphasized the importance of the mentor's knowledge of the organization and the people in it, a mentor's rank, the respect he or she was accorded by peers, and his or her knowledge of the use of power.

The most sought-after mentor is the immediate superior, since frequency of contact expedites the mentor/apprentice process and the mentor is well-positioned to act as a sponsor as well (Cook, 1979; McLane, 1981). Mentors and sponsors, as stated previously, serve similar needs, but in reality, their roles are quite different, and the protege must be aware of the distinction. Mentors stress individual growth, improving skills, and expertise. Sponsors are respected for their savvy; mentors for their wisdom (Kanter, 1979a, "Mentors Seen as Key Allies," 1980).

Characteristics of the Apprentice

A study conducted by Borman (1978) of gifted and talented students identified characteristics of the apprentice. Motivation, talent, enthusiasm, and good work habits were cited as characteristics of the apprentice in the relationship. Other writings identified respect, admiration, appreciation, gratitude and love for the mentor (Halatin, 1981; Levinson, 1978; The Woodlands Group, 1980). Ambition, the right image, working well with others and the characteristics needed to succeed are the same characteristics needed to attract a mentor (Halcomb, 1980).

> . . . if you are a useful person who makes things happen and who isn't abrasive, not too abrasive, you will find people dying to push you up. You will establish an image of yourself in the corporation, so that when doors open, people will think 'why not her?' There's a terrific need for competent people. When someone is competent, he or she develops an enthusiastic public (Moran as quoted in Halcomb, 1980, p. 16).

Regardless, the seeking out of a mentor relationship has been recognized as a valuable and highly necessary practice for all who aspire to early career success (Cook, 1979; Hennig, 1970). There is no

better method for quickly learning management skills, organizational politics, and the work environment than by having a seasoned administrator or executive develop a younger, less experienced employee.

> One's success or failure can . . . greatly depend upon whether a mentor is present or not. To have a mentor is to be among the blessed. Not to have one is to be damned to eternal oblivion, or at least to a midlevel status (Halcomb, 1980, p. 13).

Characteristics of the Mentoring Relationship

The relatively modest amount of statistical information regarding mentoring continues to support the value attributed to the mentor/apprentice relationship. Studies conducted by Heidrick and Struggles (Roche, 1979) and Grote and Stine ("Mentors Seen as Key Allies," 1980) noted that all, or nearly all, senior-echelon executives reported having had a mentor. In general, the mentor relationship began when the respondents were in their twenties and thirties. Nearly seven in ten executives acquired a mentor during the first five years of worklife (although the majority of the women formed mentor relationships during the sixth to tenth years of their worklives, recognized as a time when women generally shift from "a job" to "a career").

The studies further noted that most executives viewed the first 15 years of their career as the learning and growing period, a time when they would seek out mentors. By the age of 40, a number were realizing or approaching their career goals, and the need for a mentor began to fade (Roche, 1979; "Mentors Seen as Key Allies," 1980). In general, most respondents had more than one mentor, sometimes as many

as three or four, and often simultaneously. Throughout a professional career a variety of mentors, both male and female, could be identified. As a rule, the respondents in both the Heidrick and Struggles' (Roche, 1979) and the Grote and Stine's ("Mentors Seen as Key Allies," 1980) surveys valued the mentor relationship highly, both on a personal and a professional status, despite the transitory nature of the bond. On an average, relationships that ended (due to completion of school, job changes, retirement, divorce) lasted five years. No one regarded a former mentor as a competitor; rather as a friend or a peer. The surveys concluded that executives who had a mentor earned more money at a younger age, were better educated, and were more likely to follow a successful career plan.

Additional studies providing information concerning the characteristics inherent in mentoring relationships include a recent study of home economists by Inana (1981). She found that the majority of the respondents could identify an individual or individuals whom they felt were significant in their professional career development. These findings supported other research (Almquist and Angrist, 1971; Bernard, 1964; Cameron and Blackburn, 1981; Hennig and Jardim, 1977b) which concluded that "significant other" relationships are frequently formed by beginning professionals.

Inana (1981) noted that the majority of the respondents in her study identified female mentors. However, other studies of professional women found that females more often identified males as their mentors (Benton, 1980; Vanzant, 1981). This discrepancy could be due, in part, to the fact that home economics is a female intensive field with very few males in positions to act as mentors.

In regard to the age of the mentor, several studies identified the mentor as older than the apprentice by approximately a half generation, roughly 8 to 15 years, with the average age of the mentor at 40 years (Inana, 1981; Levinson, 1978). These findings would support research conducted by Dalton, Thompson and Price (1977) which concluded that individuals in their forties would probably be established in their profession and would then be in a position to assume responsibility for the development of others within an organization. Further, Erickson's (1963) theory of psycho-sexual development would also be supported as the theory suggests that "significant others," at age 40, begin to deal with issues of generativity (guiding and establishing the generation to come).

According to Levinson (1978) a mentoring relationship is transitional and typically lasts two to three years, eight to ten at the most, with termination the result of a move, a job change or death. Similarly, Hennig and Jardim (1977a) noted that mentoring relationships among professional women ended after ten years when women became more independent and less personally dependent on the mentor and the relaionship. However, Inana (1981) found a higher degree of stability among home economists who indicated that if a change in the relationship occurred, the change was toward continued interaction and friendship rather than termination. These findings were supported by McLane (1981) in her study of women executives and Cameron and Blackburn (1981) in their research into professional relationships in higher education.

Despite the degree of separation or change within the relationship Levinson (1978) suggested that ultimately the internalization of the mentor is seen as a major source of development with the apprentice taking the admired qualities of the mentor more fully into himself.

As a result he is better able to learn and his personality is enriched as he makes the mentor a more intrinsic part of himself.

Problems Encountered in Establishing Cross-Sexual Mentoring Relationships

Traditionally, the mentoring relationship has been recognized as a male experience. Throughout history men have acted out this relationship among themselves, opening doors, aiding skills development, and providing opportunities, as evidenced within the older professions of medicine and law. It is also true that men who thrived in large business organizations were most likely to have had the support of bosses who took a special interest in their careers (Bartol, 1978; Halcomb, 1980).

This same type of facilitation, however, has not been as readily extended to women within the organization (Cook, 1979), despite the recognized importance of this factor in the advancement and early career success of women (Cook, 1979; Halcomb, 1980; Harragan, 1977; Hennig, 1970; Houston, 1981; Hyatt, 1979; Kanter, 1979a, 1979b; McLane, 1981; "Mentors Seen as Key Allies," 1980; "Women Finally Get Mentors," 1978). Numerous reasons exist for this lack of female facilitation experiences. Women have traditionally set their sights lower due to a marked absence of other women at the top and the feeling that they would not be given opportunities for key jobs. Women have not been taken seriously as top executive or administrative talent and until recently have not been prepared scholastically, experientially, or emotionally to move into key positions (Cook, 1979). The few women who might have served as mentors have found themselves too beset by

the stresses of survival in a world of work dominated by men to provide good mentoring for younger women (Levinson, 1978). In some cases, there seemed to be a prevailing feeling that the development of women through mentoring on the part of a senior executive or administrator did not provide as good a "return on investment" for the institution as developing a male manager. Another significant but usually unstated reason for male executive reluctancy to assume mentor relationships with a female apprentice involves the possibility of office speculation over the true nature of the bond, resulting in possible negative repercussions to both mentor and apprentice (Biemiller, 1981; Halcomb, 1980; Harris, 1980; Mann, 1980; McLane, 1981; Sheehy, 1976; Thompson, 1976; "Women Executives: What Holds so Many Back?," 1982). Due to the close relationship inherent in the mentor/apprentice association, rumors of liaisons and sexual entanglement often develop. As the male mentor strives to give the woman legitimacy by conferring an implicit stamp of approval, he may spend time counseling the apprentice about managerial style, organizational culture and personal style (Fitt and Newton, 1981; Harris, 1980). As the relationship evolves to this level of nurturance and support, perceptions of others regarding the association may lead to speculation and innuendoes.

Ideally, the male mentor takes a paternal interest in his female apprentice, and whatever emotional closeness develops is along father-daughter lines (Halcomb, 1980). However, should a romance ensue, difficulties in the relationship are compounded.

> With romantic or sexual interest there may develop a power struggle where there was none before. The male mentor who is also a lover may instill in his apprentice the notion that she cannot fulfill her talents without him (p. 17).

Furthermore, if the mentor continues to harbor the belief that management is in fact a male-only profession, it is doubtful that the woman apprentice will ever move up based on her abilities alone (Herbert and Yost, 1978). The male mentor's cultural upbringing and life experiences have conditioned him to see women as wives, mothers, and sweethearts, but not as executive peers (Cook, 1979).

Establishing a good mentor relationship with a man can be difficult in a society that is both sexist and sexually charged. It has been noted that one of the things that often characterizes successful mentor relationships is a strong emotional interchange between the apprentice and mentor, where the apprentice is encouraged to directly challenge the mentor's ideas (Cook, 1979; Halcomb, 1980; Houston, 1981). Women have not always possessed the ability to successfully and constructively challenge male superiors and many men are not comfortable when being so challenged by a woman. Insecurity on the part of the female apprentice encourages the male mentor to exploit her intellect and abilities while excluding the woman's other personality qualities, thus resulting in adaptation of masculine characteristics (Levinson, 1978). Directly linked with this complication is the complex Pygmalion concept whereby one sex (in this case the male) attempts to fashion the behavior of the other (the female) in his own perfect image. As the male transforms the female to the point of perfection in his eyes, he may ultimately fall in love with his creation resulting in complications not anticipated by either party. Modern day Pygmalions, however, claim the right to do things traditionally stereotyped for one sex or the other without controversy (Money, 1977), thereby eliminating the desire to "make over" the opposite sex and avoiding these romantic complications.

Further problems result when women who are placed in mentoring relationships with males feel pressured into protecting the males' professional image resulting in feelings of insecurity regarding their behavior in the work environment (Kanter, 1977). Epstein (1970) found that women tend to be self-conscious about their sex and therefore may try to conceal their femininity and try to remain unnoticed.

A woman who assumes command of her body is a formidable foe on the pyramidal ladder. She is perceived as a threat because she is breaking the mold of traditional sex roles which have rigidly defined how she must think, talk, and act in the service of men. But there are men who welcome the overthrow of the infamous sex stereotypes that have forced them to conform.

> Unfortunately, the corporate corridors are not yet overflowing with an adequate supply of such men. But they do exist, and confident, self-assured ambitious women can establish honest human relationships with equally confident, self-assured, ambitious men (Harragan, 1977, p. 315).

Roche (1979) reporting the results of a survey of top executives mentioned in the "Who's News" column of the Wall Street Journal, noted that of those female executives identifying a mentor, seven to ten of those mentors were males. Due in part to the fact that there are simply more males in positions to assume this role (Cook, 1979; Halcomb, 1980; Houston, 1981), it still appears that men tend to occupy the power positions that will ultimately enhance the prestige of the protege (Lang, 1978). "A man's stamp of approval makes a woman a more acceptable colleague or team member" (Halcomb, 1980, p. 18).

Although females' technical abilities make them desirable, both to the male mentor and to the company, the mentor makes it behaviorally and socially possible for the female to be there and to succeed (Daniels, 1975; Hennig, 1970).

> [Associate yourself with] a winner who can become a godfather, a rabbi, a sponsor, a patron - who will invest in you, help you, teach you and speak up for you. If you're right you'll move with him. If you're wrong, disengage and try to leave him behind. But find another (Hennig and Jardim, 1977a, p. 41).

Attempts during the last 10 to 20 years to change career thinking and planning for women have shown that it is possible, but by no means easy, to overcome past patterns, attitudes, and traditions. For women to become part of the male world of work, they must face up to new and different ways of professional preparation.

Importance and Existence of the Mentoring Relationship for Females

Despite the dangers inherent in developing this relationship, women even more than men continue to find mentors important to their careers ("Women Finally Get Mentors", 1978; Collins and Scott, 1978; Epstein, 1976; Halcomb, 1980; Hennig and Jardim, 1977a; Shepphard, 1982; Thompson, 1976). Women need the psychological and tactical support of a mentor more than men (Thompson, 1976). The average businesswoman has not been inculcated with the same determination to succeed as her male counterpart, so she can generally be diverted from her career objectives more easily. Kanter (1977) stated that mentors are essential for women who aspire to administrative or management positions due to their need for the influence provided by this relationship. Women still must contend with barriers to advancement. A mentor can run interference for the apprentice as he grooms her for progressively higher-level jobs (Thompson, 1976). Mentors serve to deflect criticism, provide personal endorsements and vital inside information (Kanter, 1979a, 1979b).

Further, they are those individuals who influence promoting the apprentice for anticipated rather than demonstrated skills; those who are willing to take a chance (Kanter and Wheatley, 1978).

Business and Industry. Perhaps the most notable progress for women and the mentor relationship can be evidenced within the realm of business and industry. The women within this sector are acknowledging the need for assistance in their preparations for a move up the corporate ladder, as evidenced by the increasing number of female mentoring relationships. Although female business executives comprise only a small proportion of the total picture (less than one percent), most identify some type of mentoring development experiences (Cook, 1979; Halcomb, 1980; "Mentors Seen as Key Allies," 1980; Roche, 1979). These apprenticeships vary drastically from a congenial boss-employee relationship, to a very personal teacher-father association, with most falling somewhere midway between the two experiences (Halcomb, 1980). Most identify two critical stages in their slow and difficult climb into upper management when mentors are essential, and attribute much of their success to the knowledge, influence, and guidance of this individual. As one successful female business executive stated, "Had I worked for a different boss, I don't know if I'd be where I am today" (Halcomb, 1980, p. 15).

Science and Arts. Several authors discussed the importance of mentoring within the nursing field, with the mentor responsible for setting high standards, counseling, teaching, supporting, promoting and inspiring her apprentice (Hohman, 1979; Schorr, 1978, 1979). Others addressed the topic as it pertained to women in the fields of counseling

psychology (Gilbert, 1980) and psychotherapy (Arbetter, 1980), concluding that mentoring relationships had an enduring impact on their professional and personal developmental process. In conclusion, evidence of sponsorship for women in the arts is surfacing as the mentor relationship concept gains popularity (Halcomb, 1980).

Academic Administration. Another major executive arena where women appear to be finding at least minimal mentor relationships, despite the obvious problems, has been in the area of academic administration. Although federal legislation and affirmative action programs have provided incentives for institutions of higher education to hire women administrators, the number of women educational executives remains negligible due, in part, to the critical lack of necessary mentors within this arena.

Several studies, however, stressed the vital importance of mentoring as a strategy for successful career mobility and for expediting the progress of competent women toward administrative posts (Eaton, 1981; Erickson and Pitner, 1980; Grebner, 1975; Killough, 1977; McDonald, 1979; Moore, 1982; Rosser, 1980; Scott, 1980; Stauffer, 1978; Touchton and Shavlick, 1978). As proportionately fewer women reach administrative positions in education than men, the mentoring experience is regarded as one socialization factor which could alleviate this condition (Grebner, 1975; "No Room at the Top?," 1978; Mertz, Grossnickle, and Tutcher, 1980). The mentor usually works through close association to acquaint the apprentice with standards of behavior, attitudes and expectations for performance. At some personal risk, the mentor places trust in the apprentice and stimulates the development of a personal ethic, knowledge, motivation, preparation and standard of decision making (Erickson and

Pitner, 1980; Moore, 1982). Contrary to these findings however, Cameron and Blackburn (1981) found no correlation for consequences of mentor emotional support, resulting in an assumption that the relationship is kept professional and that the mentor facilitates a number of apprentices.

Picker (1980) in her study of male and female administrators, found that the female participants actually had received more sponsorship than their male counterparts, which contrasted strongly with the belief by both male and female administrators that men are sponsored more frequently than women. In general, younger female administrators received more sponsorship than their older female colleagues.

However, despite the somewhat improved picture, the facts indicate that the rate of mentor sponsorship for women in all fields remains negligible (Benton, 1980; Biemiller, 1981; Cook, 1979; Holt, 1981; Picker, 1980; "Women Executives: What Holds So Many Back?," 1982).

Females as Mentors

One way to improve the odds is for women to begin assuming the role of mentor/sponsor. Indeed, women can be just as effective as males, and probably more so, in guiding other, younger women. Besides offering the guidance and nurturance typical of this relationship, they are also in a position to serve as role models (Benton, 1980; Halcomb, 1980; Josefowitz, 1980; Killough, 1977; Lang, 1978; Larwood, Wood, and Inderlied, 1978).

Women mentoring women seems ideal. However, until quite recently, few top women executives existed to play that role. Often those who did either occupied perches too precarious to permit them to spend time

on anyone else, or, "battered and bloody," they were resentful of the younger women who were being given chances they themselves never had ("Women Finally Get Mentors," 1978; Halcomb, 1980). Furthermore, women demonstrated a reluctance to serve as mentors due to a fear that they would endanger their own careers if male colleagues thought of them as being prejudiced in favor of women. Other reasons centered around a lack of time as they devoted themselves to their personal development, a belief that male mentors continue to be superior to female mentors (Halcomb, 1980), and a belief that mentoring was a form of compromising themselves to a structure based on favoritism rather than merit (Hall and Sandler, 1983).

Today, however, as more women are moving closer to parity with their male colleagues, female mentors are beginning to appear ("Women Finally Get Mentors," 1978; Benton, 1980; Josefowitz, 1980; "Women Executives: What Holds So Many Back?," 1982), "marking another stage in the integration of women into management" ("Women Finally Get Mentors," 1978, p. 74). As professionally successful women develop more confidence in their new roles, more will become aware of the benefits involved in the mentoring process, assuming the dual responsibilities of fulfilling the role ably and providing a leadership model for others (Killough, 1977).

To create a network of supporters out of individual clout, however, requires that a person pass on and share power, that subordinates and peers be empowered by virtue of their connection with that person. Traditionally, neither men nor women have seen women as capable of sponsoring others, even though they may be capable of achieving and succeeding on their own. Women have been viewed as the

recipients of sponsorship rather than as sponsors themselves (Kanter, 1979a, 1979b).

> 'Mentoring is both a proof of the executive woman's power and a means of impressing it upon others,' says Carl J. Beeman, performance analyst for Chrysler Institute in Detroit. 'Not only does the mentor role show that the woman is not a token, but it also is a way to secure her own future' ("Women Finally Get Mentors," 1978, p. 80).

Sargent (1978) identified the mentoring process as a major social skill requisite for successful management. Clout comes from the prestige of one's subordinates, and whether it should or should not be, the mentor route is a two-way street, and the sooner women at all levels understand this, the further it will take them (Halcomb, 1980). Throughout one's career the paramount question women must continually ask is, "What am I giving and what am I taking from each professional experience?" (Halcomb, 1980, p. 78).

Established Mentor Programs

Currently there is a growing interest in organizationally sponsored mentor programs ("Women Finally Get Mentors," 1978; Cook, 1979; Johnson, 1980; Lynch, 1980; "Mentors Seen as Allies," 1980) as companies in business and industry, and educational institutes find themselves unable to move women and minorities into top management. Kanter (1977) discussed the concept of "artificial sponsorship" whereby women and minorities are connected with senior people other than their immediate managers for the purpose of easing them into the system. Over time these sponsors hopefully provide a continuing link to power.

Although few models exist to determine whether this traditionally voluntary relationship can be successfully mandated, many organizations

are experimenting with it (Cook, 1979; Lynch, 1980; "Mentors Seen as Allies," 1980). In Continuing Education Corporation's Advanced Mangement Program the classroom learning experience is augmented by a mentor figure back on the job ("Mentors Seen as Key Allies," 1980). The Jewel Tea Company incorporates a "first assist" relationship between each trainee and a seasoned vice-president or divisional manager who acts as an adviser and mentor, the concept being that each trainee will have someone to relate to during the training program. The sponsor comes to know more about the trainee than any other worker and is ultimately influential in the trainee's permanent job decision (Collins and Scott, 1978; Miller, 1980; "How Jewel Resets Its Crown," 1980).

The banking industry has also begun implementing formal mentor programs such as that of Security Pacific National Bank in Los Angeles. Although highly unstructured, senior executives are charged with the responsibility of selecting an apprentice to groom for an executive position (Cook, 1979).

In education, a number of formal mentor programs involving professors/professionals and students have emerged (Lynch, 1980; Miller and Brickman, 1982; Taylor and McLaughlin, 1982; Zacur and Coleman, 1982). In general these programs include a professor or professional mentor who possesses both practical organizational experience and a grounding in the academic coursework being studied by the student apprentice. Acting as a professional role model, the mentor not only provides verbal advice and encouragement, but expresses and demonstrates a genuine interest in the personal development of each apprentice.

Formal mentor programs attempt to offer role models, potential sponsors and allies. They try to lay the ground work for a support system and power base that will ultimately help women as well as men succeed in management (Kanter, 1977). Although these programs involve a commitment of time, effort and expense that transcends what is normally required in executive training, the potential rewards to both management and trainee are abundant (Zacur and Coleman, 1982). Individuals trained via this method will, in turn, be able to serve as mentors for others and give back to the organizational system some of the insight they originally gained.

> Our growing corporate manpower requirements will make mentor or sponsor relationships a must for men and women who aspire to management positions. In the future, organizations will not have the luxury of waiting for people to acquire years of work experience. If we do . . . that experience will most likely be outdated, as technology, systems, and interpersonal relations accelerate in sophistication (Cook, 1979, pp. 85-86).

Summary

In summary, the process of mentoring is seen as a vitally important developmental process within the business and educational environment, both to males and females. A relatively new subject for discussion, the definition alone has caused a certain amount of confusion. Numerous interpretations have been furnished for the term; however, all appear to suggest the role of a facilitator or adviser who may or may not act as a sponsor, and who possesses expertise which he/she is willing to share. Nearly all successful executives report having had at least one mentor, with many identifying three or four.

Historically the exclusive domain of the male, women have found it difficult to establish mentoring experiences. Numerous reasons

exist for male executive reluctancy to assume mentor relationships with female apprentices, but the most outstanding would seem to be the possibility of potentially damaging romantic speculation.

Regardless of the problems encountered, successful women continue to identify the male executive as the prominent mentor figure, due, in part to the lack of female executives to serve in this capacity. Today, however, this situation is changing and women are beginning to reciprocate with the kind of support they were initially extended. Furthermore, as organizations and institutions recognize the value of this relationship in promoting women and minorities, many are sponsoring corporate and academic mentoring programs.

CHAPTER III

METHODS AND PROCEDURES

Selection and justification of the sample, development of the instrument, data collection procedures, and the statistical analysis used in the study are presented in this chapter. The data collected in this study were intended to accomplish three major objectives: 1) to determine whether responses of home economics administrators were different from those of engineering administrators in terms of the number of past and present mentoring relationships; 2) to examine selected characteristics of the mentoring relationship and determine if differences exist between the responses of administrators in home economics and those in engineering; 3) to determine if the responses of home economics administrators were different from those of engineering administrators with respect to the perceived importance of mentoring relationships in one's advancement within higher education administration.

Selection of the Sample

The population consisted of administrators in Colleges of Home Economics (or its equivalent) and Engineering within land grant institutions. A listing of all 72 land grant institutions was acquired from the National Association of State Universities and Land Grant Colleges and checked against a listing from the Yearbook of Higher Education (1982). Those institutions which included both home economics and

engineering and which had a 1981-82 total enrollment figure of more than 15,000 were utilized in the study. Sixty-six institutions met these criteria.

College or department names were acquired from college catalogs for the institutions selected. Those institutions without a discernible college or department of home economics were contacted by the researcher in order to determine the location of the department. Those institutions where individual departments within home economics had been segmented and engulfed in other departments (i.e. interior design in the College of Architecture) were eliminated from the study. The Yearbook of Higher Education (1982) was used to acquire the names of home economics deans/directors, or in cases where the home economics unit was part of another college, department heads. The March, 1982, issue of Engineering Education provided a similar listing for administrators within Colleges of Engineering.

An initial letter (Appendix A) was sent to deans of home economics and engineering within each qualifying institution soliciting names of associate deans and department heads or equivalent. From this information a total of 508 names were acquired for use in the study. Table I indicates the positions of engineers and home economists in each of the three administrative categories (dean, associate dean, department head or equivalent).

Rationale for Selection of the Sample

The sample was chosen in order to determine the existence of mentoring relationships among academic administrators in higher education. Home economics was selected because it is a female intensive

TABLE I

POSITION OF INDIVIDUALS SELECTED FOR THE STUDY

Position	Engineering N	Engineering %	Home Economics N	Home Economics %	Total N	Total %
Dean	31	9.23	27	15.70	58	11.42
Associate Dean	34	10.12	32	18.60	66	12.99
Department Head	271	80.65	113	65.70	384	75.59
Totals	336	100.00	172	100.00	508	100.00

profession dominated by female administrators, while engineering was selected due to its predominance of male administrators. It was hypothesized that differences would exist between the two groups regarding mentoring relationships. The researcher further believed that perhaps the human orientation of the home economics field and the technical orientation of the engineering field would produce differences among these administrators. Deans, associate deans, and department heads or their equivalent composed the sample because these administrators perform the types of duties and hold the responsibilities of overall academic administrative leadership.

Development of the Research Instrument

The research instrument consisted of a mailed questionnaire. Questions were constructed to gather information pertinent to the objectives of the study. A review of the literature revealed information pertaining to each of the three objectives. Three pilot tests of the questionnaire were conducted by the researcher in order to refine the instrument.

Initial Pilot of the Test Instrument

Initial questions were formulated based upon a thorough review of the literature and pilot tested among four female faculty members in the Department of Clothing, Textiles and Merchandising at Oklahoma State University. The purpose of the pilot was to clarify and refine questions for inclusion in the instrument.

Following the pilot test, questions were revised or changed from open-ended to closed response questions in order to facilitate analysis

of the data. Various questions were expanded based upon answers provided by respondents. Three major categories were established (You in the Role of Apprentice, You in the Role of Mentor, and General Information Regarding the Mentoring Relationship) and questions were matched across the first two categories.

Second Pilot Test of the Instrument

A second pilot test was conducted among administrators at Oklahoma State University. Ten administrators representing nine departments in five colleges participated. The Colleges of Home Economics and Engineering were excluded as both would be included in the larger study. The purpose of this pilot was to determine the clarity of questions and categories within the instrument.

At the conclusion of this pilot test various questions which seemed irrelevant were eliminated in order to shorten the instrument. Other questions were refined, clarified and recategorized. Format was revised to eliminate confusion regarding apparent repetition of questions. Print reduction was employed to shorten the apparent overall length of the instrument. This also allowed all items in each category to be placed on a separate page.

Third Pilot Test of the Instrument

A third pilot test was conducted using the revised questionnaire. The purpose of this pilot was to ascertain whether the questions and categories were presented in a clear, concise and understandable manner in order that potential respondents could accurately and easily complete the questionnaire. The subjects for this pilot test consisted of eight

faculty members within the Colleges of Home Economics and Engineering at Oklahoma State University. Following an examination of the completed questionnaires, additional response space was provided for open-ended questions, directions were revised, and typing errors were corrected.

Final Instrument

The final instrument was a four-part questionnaire (Appendix B) containing 46 questions; 18 multiple choice, 16 fill-in-the-blank, and 12 narrative. Part I solicited information regarding the respondent in the role of apprentice, while Part II sought to gain information with respect to the respondent in the role of mentor. Part III was utilized to acquire general information regarding the mentoring relationship and the perceived importance of mentoring to advancement within academic administration. Part IV was designed to collect general demographic information concerning sex, academic position and subject matter area (home economics or engineering).

Definitions for the terms 'mentor' and 'apprentice' were provided on the questionnaire in order to eliminate the possibility of confusion in interpretation of terminology. Each questionnaire was coded to facilitate transfer of information for data analysis and to provide anonymity for each respondent.

Collecting the Data

Each individual selected for the study was mailed a packet containing the following items: an initial cover letter (Appendix A) explaining the purpose of the study and soliciting participation in the study, a copy of the questionnaire, and a self-addressed stamped return

envelope. Following a three-week interval, those individuals who had not yet returned questionnaires were sent a letter (Appendix A) requesting completion and immediate return. Approximately two months later a third letter (Appendix A), a second copy of the questionnaire, and a self-addressed stamped return envelope were sent to those individuals who had not yet responded to the study. Of those not responding to the third letter, random phone calls were placed urging participation.

Statistical Analysis of the Data

Analysis of the data was conducted through use of chi-squares, frequency counts, and where feasible, mean scores. The arbitrary decision was made that differences would be considered significant at the .05 level for each of the hypotheses tested in the study. A presentation of the findings for each objective is included in chapter four.

CHAPTER IV

ANALYSIS OF DATA

The purposes of the study were to determine the presence and characteristics of mentoring relationships among administrators of home economics units in higher education (a basically human-oriented profession dominated by female administrators), and to determine the perceived importance of the relationship in one's advancement within higher education administration. In order to further investigate the situation and determine whether this relationship was typical, administrators in colleges of engineering were surveyed to provide a source of comparison. Engineering is a technically oriented profession dominated by male administrators, so it was believed that differences might occur between these two groups.

The specific research objectives were to determine whether responses of home economics administrators were different from responses of engineering administrators

1. in terms of the number of past and present mentoring relationships;

2. in regard to selected characteristics of the mentoring relationship;

3. with respect to the perceived importance of mentoring relationships in one's advancement within higher education administration.

Questionnaire Response Rate

Data were obtained by means of a mailed questionnaire to 508 administrators: 172 in home economics and 336 in engineering. At the end of a 13 week period, 281 questionnaires had been returned, resulting in a 55 percent response rate. Of the 281 returned questionnaires, 259 (92%) were usable. The remaining 22 questionnaires were returned unanswered. Lack of available time was the most frequently mentioned reason for refusal to participate in the study. The 259 usable questionnaires included 119 of the 172 sent to home economists (69.19%) and 140 of the 336 (41.67%) sent to engineers.

The questionnaire consisted of four parts: various aspects of the mentoring and apprentice relationships, perceived importance of mentoring to advancement in academic administration, and demographic data. Not all of the responding administrators answered all questions, therefore, the total number of responses (N's) differs.

Demographic Data

Demographic data concerning sex, administrative position, and subject matter area are presented in Table II. The respondents included 140 engineering administrators (54.05%) and 119 (45.95%) administrators in home economics. Of these respondents 24 (9.27%) were deans, 48 (18.53%) were associate deans and 187 (72.20%) held the position of department head or equivalent. One hundred eighty (69.50%) of the total sample were male and 79 (30.50%) were female. All female administrators were in home economics.

Further analysis revealed that among engineering administrators responding to the questionnaire, the majority (80%) held the position

TABLE II

SEX AND POSITION OF RESPONDENTS

Variable	Engineering (N=140) N	%	Home Economics (N=119) N	%	Total (N=259) N	%
Sex						
Male	140	100.00	40	33.61	180	69.50
Female	0	0.00	79	66.39	79	30.50
Total	140	100.00	119	100.00	259	100.00
Administrative Position						
Dean	8	5.70	16	13.44	24	9.27
Associate Dean	20	14.30	28	23.53	48	18.53
Department Head or Equivalent	112	80.00	75	63.03	187	72.20
Total	140	100.00	119	100.00	259	100.00

of department head or equivalent, while only 5.7 percent of the respondents held the position of dean. Among the home economics respondents, 63.03 percent held the position of department head or equivalent, while 13.44 percent were at the level of dean. A larger response from department heads was anticipated due to the proportionately larger number of administrators holding this rank. It was not the purpose of this study to compare administrators at any one level with another. Deans, associate deans, and department heads or their equivalent composed the sample because these administrators perform the types of duties and hold the responsibilities of overall academic leadership.

Statistical Treatment of the Data

Chi-squares, frequency counts, and where feasible, means, were employed to analyze the data. Where necessary, cells were collapsed to facilitate analysis. Results of the statistical analysis are presented in the following order:

1. Analysis of differences between home economics administrators and administrators in engineering with respect to the respondent in the role of apprentice, the respondent in the role of mentor, and the perceived importance of the mentoring relationship in one's advancement within higher education administration.

2. Analysis of differences between male and female administrators with respect to the respondent in the role of apprentice, the respondent in the role of mentor, and the respondent's perceived importance of the mentoring relationship in one's advancement within higher education administration.

3. Examination of the status of the respondents at point of identification of the mentoring relationship with data presented to compare differences between administrators in home economics and engineering, as well as differences between male and female administrators.

4. A presentation and examination of the overall findings concerning the mentoring process among administrators of home economics and engineering in higher education.

Due to the nature of the open-ended questions, the responses generated were so diverse that they could not be analyzed systematically. Appendix C includes the representative responses of the engineering and home economics administrators in their own words. General impressions are reported throughout the presentation and examination of the data.

Comparison of Home Economics and Engineering Administrators

One purpose of the study included an attempt to determine whether differences would occur between home economics administrators and engineering administrators. The following data address the findings related to this comparison.

Respondent in the Role of Apprentice

The following hypotheses were tested to accomplish objective one. There are no significant differences between responses of administrators in home economics and administrators in engineering with regard to

1. the existence of a current mentoring relationship,
2. the existence of a past mentoring relationship,

3. the number of mentoring relationships in the educational arena,

4. the number of mentoring relationships outside the educational area.

Respondents were asked to indicate the existence of their mentoring relationships, both past and present. Chi-square values and percentage distributions are presented in Table III. Significant differences ($p < .05$) were found between the two groups on both variables. More than one third of the home economics administrators were able to identify an individual whom they would currently regard as a mentor, however only one fifth of the administrators in engineering could identify a current mentor. In reference to past mentoring relationships, more than three fourths of the administrators in home economics indicated that in the past an individual has served as a mentor, while only slightly more than half (54.86%) of the engineering administrators could identify a past mentoring relationship.

Data regarding the number of mentoring relationships within the educational arena are presented in Table IV. A significant difference ($p < .05$) was found between the groups as home economics administrators generally indicated more mentoring relationships in education than did engineering administrators. More than half of the home economists indicated three (28.40%), four (11.11%), or five or more (13.58%) mentoring relationships, while more than two thirds of the engineers identified either no relationships (1.54%), one relationship (35.38%), or two mentoring relationships (32.31%) in the educational arena. A comparison of means (Table V) further illustrates these findings.

TABLE III

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF CURRENT AND PAST MENTORING RELATIONSHIPS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Mentoring Relationships	Engineering (N=139)						Home Economics (N=119)						Chi-Square Values	Level of Significance
	Yes		No		Total		Yes		No		Total			
	N	%	N	%	N	%	N	%	N	%	N	%		
Current	27	19.42	112	80.58	139	100.00	43	36.13	76	63.87	119	100.00	9.005	0.0026
Past	76	54.68	63	45.32	139	100.00	91	76.47	28	23.53	119	100.00	13.339	0.0003

TABLE IV

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF MENTORING RELATIONSHIPS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING WITHIN THE EDUCATIONAL ARENA

Number of Relationships	Engineering Respondents (N=65)		Home Economics Respondents (N=81)		Chi-Square Values	Level of Significance
	N	%	N	%		
None	1	1.54	3	3.70		
One	23	35.38	15	18.52		
Two	21	32.31	20	24.69		
Three	12	18.46	23	28.40		
Four	6	9.23	9	11.11		
Five or more	2	3.08	11	13.58		
Total	65	100.00	81	100.00	11.380	0.0443

TABLE V

MEANS REPRESENTING THE TOTAL NUMBER OF MENTORING RELATIONSHIPS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

	Engineering			Home Economics		
Variable	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Relationships Within Education	65	2.08	1.12	81	3.16	3.40
Relationships Outside Education	77	.81	.96	88	.71	1.09

Examination of the data regarding the number of mentoring relationships outside the educational arena indicated that the engineering administrators tended to enter into slightly more noneducational relationships than did home economics administrators. Slightly more than 50 percent of the engineers identified one or more relationships, whereas less than 40 percent of the home economists could identify any mentoring relationships outside education (Table VI). No significant differences were found between the two groups on this dimension and little difference was apparent when comparing means (Table V).

The second objective of the study was to examine selected characteristics of the mentoring relationship and determine if differences existed between the responses of administrators in home economics and those in engineering. The following hypotheses were tested in order to accomplish this objective. There are no significant differences between responses of administrators in home economics and administrators in engineering with respect to

1. apprentice's level of career development at the onset of the first mentoring relationship,

2. age of the mentor at the onset of the first mentoring relationship,

3. age of the apprentice at the onset of the first mentoring relationship,

4. sex of the mentor in the one most important mentoring relationship within the educational arena,

5. age of the apprentice in the one most important mentoring relationship within the educational arena,

TABLE VI

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF MENTORING RELATIONSHIPS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING OUTSIDE THE EDUCATIONAL ARENA

Number of Relationships	Engineering (N=77)		Home Economics (N=88)		Chi-Square Values	Level of Significance
	N	%	N	%		
None	38	49.35	53	60.23		
One	22	28.57	18	20.45		
Two	11	14.29	12	13.64		
Three or more	6	7.79	5	5.68		
Total	77	100.00	88	100.00	2.284	0.5156

6. age of the mentor in the one most important mentoring relationship within the educational arena,

7. association between the apprentice and the mentor in the one most important mentoring relationship within the educational arena,

8. mentor's academic position in the one most important mentoring relationship within the educational arena,

9. instigator of the one most important mentoring relationship within the educational arena,

10. apprentice's level of career development at the onset of the one most important mentoring relationship within the educational arena,

11. tenure of the one most important mentoring relationship within the educational arena,

12. cause for termination of the one most important mentoring relationship within the educational arena,

13. mentoring functions performed in the one most important mentoring relationship within the educational arena..

Respondents were questioned concerning characteristics identified in the first mentoring relationship. Table VII presents the chi-square value and percentage distributions representing the level of career development at the onset of that relationship. No significant differences were found to exist between the two groups on this variable as more than half of both the administrators in home economics (43.01% undergraduate, 21.51% master's level) and administrators in engineering (37.50% undergraduate, 25% master's level) indicated initiation of the first mentoring relationship at the undergraduate or master's level.

Table VIII displays the results obtained concerning the age of both the mentor and the apprentice, while Table IX presents the mean

TABLE VII

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS REPRESENTING LEVEL OF CAREER DEVELOPMENT AT THE ONSET OF THE FIRST MENTORING RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Level of Career Development	Engineering (N=80)		Home Economics (N=93)		Chi-Square Values	Level of Significance
	N	%	N	%		
Undergraduate	30	37.50	40	43.01		
Masters	20	25.00	20	21.51		
Doctoral	12	15.00	15	16.13		
On the Job/ Professional	13	16.25	15	16.13		
Other	5	6.25	3	3.23		
Total[a]	80	100.00	93	100.00	1.436	0.8379

[a]Totals do not equal 100 percent due to rounding.

TABLE VIII

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS REPRESENTING AGE OF THE MENTOR AND APPRENTICE AT THE ONSET OF THE FIRST MENTORING RELATIONSHIP

Age	Engineering N	Engineering %	Home Economics N	Home Economics %	Chi-Square Value	Level of Significance
Mentor						
20-29	1	1.33	3	3.41		
30-39	20	26.67	16	18.18		
40-49	31	41.33	37	42.05		
50-59	17	22.67	25	28.41		
60-69	6	8.00	6	6.82		
70-79	0	0.00	1	1.14		
Total[a]	75	100.00	88	100.01	7.372	0.1944
Apprentice						
10-19	13	16.46	23	24.73		
20-29	58	73.42	54	58.06		
30-39	5	6.33	13	13.98		
40-49	3	3.80	3	3.23		
Total[a]	79	100.01	93	100.00	5.372	0.1465

[a]Totals do not equal 100 percent due to rounding.

TABLE IX

MEAN AGE OF MENTOR AND APPRENTICE AT THE ONSET OF THE FIRST MENTORING RELATIONSHIP

	Engineering			Home Economics		
Age	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Mentor	75	43.67	8.68	88	44.67	9.39
Apprentice	79	23.78	5.78	93	23.63	6.19

age of mentor and apprentice for each group. No significant differences were identified. Slightly more than 23 years was the mean age identified by both responding groups for the apprentice and approximately 44 years for the mentor.

In an open-ended question, respondents were asked to describe the manner in which they had served as an apprentice. Appendix C presents a representative sample of responses, however in general, the home economics administrators identified some aspect of observing, interpreting, providing assistance and consultation, and finally emulating.

Many responses included a reference to character development, such as "learned to identify own potential." Engineering administrators were more inclined to identify themselves as learners or workers in relation to their professional rather than their personal growth. Several responses made reference to "learning in research and professional practice," or "worked on mentor's research project." Both groups interpreted the role of apprentice as more typically one of receiver rather than giver, with little or no reference to the reciprocity of the relationship.

Several items within the questionnaire were designed to assess characteristics observed in the one most important mentoring relationship in the educational arena. Table X illustrates the chi-square values and percentage distributions for the characteristics of sex, age of apprentice, age of mentor, relationship between mentor and apprentice, and academic position of mentor. Means for the age variables are presented in Table XI.

Significant differences were found between the two groups in respect to sex of the mentor. Nearly all the responding administrators

TABLE X

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF SEX, AGE, RELATIONSHIP, AND ACADEMIC POSITION WITHIN THE MOST IMPORTANT MENTORING RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Variable	Engineering N	Engineering %	Home Economics N	Home Economics %	Chi-Square Values	Level of Significance
Sex						
Male	77	98.72	34	39.08		
Female	1	1.28	53	60.92		
Total	78	100.00	87	100.00	66.438	0.0001
Age of Apprentice						
10-19	7	9.33	7	8.14		
20-29	52	69.33	45	52.33		
30-39	9	12.00	25	29.07		
40-49	7	9.33	9	10.47		
Total[a]	75	99.99	86	100.01	7.568	0.0558
Age of Mentor						
20-29	0	00.00	2	2.44		
30-39	22	30.14	13	15.85		
40-49	27	36.99	31	37.80		
50-59	21	28.77	29	35.37		
60-69	3	4.11	6	7.32		
70-79	0	00.00	1	1.22		
Total[a]	73	100.01	82	100.00	7.372	0.1944
Relationship						
Undergraduate Student	14	18.18	13	14.94		
Colleague/Professional Peer/Friend	10	12.99	10	11.49		
Faculty Member	6	7.79	10	11.49		
Neighbor	0	00.00	1	1.15		
Graduate Student	33	42.86	35	40.23		
Department Head	3	3.90	5	5.75		
Assistant	4	5.19	2	2.30		
Highschool Student	2	2.60	1	1.15		
Associate Dean	2	2.60	0	00.00		
Employee/Extension Personnel	3	3.90	7	8.05		
Member of Professional Group or Committee	0	00.00	2	2.30		
Highschool Teacher	0	00.00	1	1.15		
Total[a]	77	100.01	87	100.00	9.622	0.5647
Academic Position						
Member of Faculty	50	63.29	35	40.70		
Assistant/Associate Dean or Higher	7	8.86	20	23.26		
Department Head	19	24.05	22	25.58		
Other	3	3.80	9	10.47		
Total[a]	79	100.00	86	100.01	11.850	0.0079

[a]Totals do not equal 100 percent due to rounding.

TABLE XI

MEAN AGE OF MENTOR AND APPRENTICE IN THE MOST IMPORTANT MENTORING RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

	Engineering			Home Economics		
Age	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Apprentice	75	26.36	6.98	86	28.31	7.48
Mentor	73	43.70	7.46	82	46.71	9.17

in engineering identified male mentors (98.72%), whereas more than half of the responding administrators in home economics (60.92%) identified female mentors.

In assessing the age for both apprentice and mentor at the onset of the one most important mentoring relationship within the educational arena, no significant differences were found as more than three-fifths of the administrators in engineering (69.33%) and more than half of the home economics administrators (52.33%) revealed that their age as apprentice was between 20-29 years. Examination of means showed that home economics administrators tended to be slightly older (28.31) than administrators in engineering (26.36) at the onset of the relationship.

About two-thirds of the engineering administrators indicated their mentor's age to be between 30 and 49 years, while 73.17 percent of the home economics respondents identified mentors between the ages of 40 and 59 years. The mean ages, as illustrated in Table XI, were 43 years for mentors in engineering and 46 years for mentors in home economics.

With regard to the relationship between the mentor and apprentice, no significant differences were found between the two groups as more than two-fifths of both administrators in engineering and home economics (42.86% of the engineers, 40.23% of the home economists) were graduate students at the onset of the most important mentoring relationship within the educational arena. Other major classifications were found to be undergraduate student (18.18% of the engineers, 14.94% of the home economists) and colleague, professional peer, or friend (12.99% of the engineers, 11.49% of the home economists).

A significant difference was found between the two groups in regard to mentor's academic position during the mentoring relationship. More than three-fifths of the administrators in engineering (63.29%) identified their mentor in the role of faculty member, while the responses provided by the administrators in home economics were much more diverse, with nearly 50 percent identifying their mentor at the administrative level, department head or higher (25.58% department head, 23.26% assistant or associate dean, dean, or higher).

Results of the chi-square tests and percentage distributions are presented in Table XII for the four characteristics: level of apprentice career development at the onset of the relationship, instigator of the relationship, length of the relationship, and cause of termination of the relationship. No significant differences were found between the two groups on any of the four characteristics. Table XIII illustrates the means for length of association among respondents whose mentoring relationship had terminated. Approximately nine years was the mean duration for all mentoring relationships.

The causes for termination of the mentoring relationships were quite varied although graduation of the apprentice (27.27% engineers, 9.80% home economists), geographical move of the apprentice (12.73% engineers, 23.53% home economists), and death of the mentor (20% engineers, 27.45% home economists) were found to be the reasons most often provided. No statistically significant differences existed between the two groups on this variable.

Levinson's (1978) six mentoring functions were used to assess descriptors identified within the mentoring relationship. Table XIV illustrates the results of the chi-square tests and presents the

TABLE XII

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF SELECTED CHARACTERISTICS WITHIN THE MOST IMPORTANT MENTORING RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Variable	Engineering N	Engineering %	Home Economics N	Home Economics %	Chi-Square Values	Level of Significance
Level of Career Development						
Undergraduate	16	20.25	14	16.09		
Masters	22	27.85	17	19.54		
Doctoral	14	17.72	19	21.84		
On the Job/ Professional	25	31.65	35	40.23		
Other	2	2.53	2	2.30		
Total	79	100.00	87	100.00	2.820	0.5885
Instigator of the Relationship						
Mentor	26	34.21	31	35.63		
Apprentice	22	28.95	19	21.84		
Mutual	21	27.63	34	39.08		
Cannot Identify	7	9.21	3	3.45		
Total	76	100.00	87	100.00	4.609	0.2027
Length of Relationship						
1-4	21	40.38	15	30.00		
5-9	12	23.08	15	30.00		
10-14	6	11.54	9	18.00		
15-19	4	7.69	7	14.00		
20-24	7	13.46	1	2.00		
25-29	1	1.92	2	4.00		
30-34	0	0.00	1	2.00		
40-45	1	1.92	0	00.00		
Total[a]	52	99.99	50	100.00	9.549	0.2156
Cause of Termination						
Graduation of Apprentice	15	27.27	5	9.80		
Maturation	6	10.91	7	13.73		
Geographical Move of Apprentice	7	12.73	12	23.53		
Retirement of Mentor	5	9.09	6	11.76		
Death of Mentor	11	20.00	14	27.45		
Apprentice Bypassed Mentor/Bad Feelings	2	3.64	2	3.92		
Mutual Change of Employment	4	7.27	5	9.80		
Departure of Mentor	5	9.09	0	00.00		
Total[a]	55	100.00	51	99.99	11.821	0.1066

[a]Totals do not equal 100 percent due to rounding.

TABLE XIII

MEAN LENGTH OF THE MOST IMPORTANT MENTORING RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Profession	N	Mean	Standard Deviation
Engineers	52	9.21	8.17
Home Economists	50	8.92	7.21

TABLE XIV

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS REPRESENTING MENTORING FUNCTIONS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING (ROLE OF APPRENTICE)

Function	Engineering						Home Economics						Chi-Square Value	Level of Significance
	Yes		No		Total		Yes		No		Total			
	N	%	N	%	N	%	N	%	N	%	N	%		
Teacher	62	79.49	16	20.51	78	100.00	70	80.46	17	19.54	87	100.00	0.024	0.8761
Sponsor	34	43.59	44	56.41	78	100.00	62	71.26	25	28.74	87	100.00	12.946	0.0003
Host and Guide	23	29.49	55	70.51	78	100.00	54	62.07	33	37.93	87	100.00	17.542	0.0001
Exemplar	58	74.36	20	25.64	78	100.00	77	88.51	10	11.49	87	100.00	5.533	0.0187
Counselor	56	71.79	22	28.21	78	100.00	73	83.91	14	16.09	87	100.00	3.538	0.0600
Realization of the Dream	15	19.23	63	80.77	78	100.00	42	48.28	45	51.72	87	100.00	15.344	0.0001

percentage distributions for each of these six variables. No significant differences were found for the variables teacher and counselor, suggesting that both groups strongly support these variables as functions performed by the mentor. Statistically significant differences were found between the two groups on the following variables: sponsor, host and guide, exemplar, and realization of the dream. Less than half of the engineering administrators could identify the functions of sponsor, host and guide, and realization of the dream as descriptors of their mentors, while in each case more than half or very nearly half of the home economics administrators felt these to be functions attributable to their mentoring relationships. A large majority of both groups (74.36% engineers, 88.51% home economists) identified the function exemplar as one performed by their mentor.

Several open-ended questions allowed respondents to describe aspects of the mentoring relationship and characteristics of the mentor. A representative sample of the open-ended questions appear as written by the respondents in Appendix C. General impressions concerning the manner in which the relationship developed indicate that for both administrators in home economics and engineering the initial involvement resulted from either student/faculty interaction, or some aspect of the work environment (i.e. research, mutual faculty assignments). A number of respondents interpreted the question in a more abstract manner generating responses which suggested that the relationship evolved gradually, through a slow development of mutual respect. When asked to describe the relationship, responses were quite varied, although generally the answers elicited from administrators in home economics tended to suggest more personal relationships than those provided by the engineering

administrators. Reference to characteristics possessed by the mentor once again elicited a wide variety of responses, however both groups implied that their mentors were not only possessed of a true knowledge of their profession, in fact leaders in their chosen field, but were warm, caring individuals concerned with the advancement of the apprentice.

Respondent in the Role of Mentor

The following hypotheses were tested to accomplish objective one. There are no significant differences between responses of administrators in home economics and administrators in engineering with regard to

1. the existence of a current apprentice relationship,
2. the existence of a past apprentice relationship,
3. the number of apprentice relationships in the educational arena,
4. the number of apprentice relationships outside the educational arena.

Examination into the existence of current and past apprentice relationships resulted in significant differences between the two groups for both variables. As illustrated in Table XV home economists were more often currently serving as mentors with nearly 60 percent able to identify a current apprentice, while only 40 percent of the engineers were involved in such a relationship. Furthermore, 75 percent of the home economists recalled a past apprentice relationship, whereas only 50 percent of the engineers indicated past apprenticeship involvement.

Data regarding the number of apprentice relationships both within and outside the educational arena were found to be quite varied. No

TABLE XV

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF CURRENT AND PAST APPRENTICE RELATIONSHIPS IDENTIFIED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Mentoring Relationships	Engineering						Home Economics						Chi-Square Values	Level of Significance
	Yes		No		Total		Yes		No		Total			
	N	%	N	%	N	%	N	%	N	%	N	%		
Current	56	40.29	83	59.71	139	100.00	68	57.63	50	42.37	118	100.00	7.685	.0056
Past	68	49.28	70	50.72	138	100.00	89	75.42	29	24.58	118	100.00	18.338	.0001

significant differences existed between the two groups for either variable (Tables XVI and XVII). Means illustrating both of these variables are presented in Table XVIII and indicate that engineers tended to involve themselves in more apprentice relationships within the educational arena than did home economists. Little difference was apparent in the number of relationships outside the educational arena.

The following hypotheses were used in order to accomplish the second objective of the study. There are no significant differences between responses of administrators in home economics and administrators in engineering with respect to

1. number of years into the mentor's career at the onset of the first apprentice relationship,

2. age of the mentor at the onset of the first apprentice relationship,

3. age of the apprentice at the onset of the first apprentice relationship,

4. sex of the apprentice in the one most important apprentice relationship within the educational arena,

5. age of the mentor at the onset of the one most important apprentice relationship within the educational arena,

6. age of the apprentice at the onset of the one most important apprentice relationship within the educational arena,

7. association between the mentor and the apprentice in the one most important apprentice relationship within the educational arena,

8. apprentice's academic position in the one most important apprentice relationship within the educational arena,

TABLE XVI

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF APPRENTICE RELATIONSHIPS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING WITHIN THE EDUCATIONAL ARENA

Number of Relationships	Engineering (N=58) N	%	Home Economics (N=59) N	%	Chi-Square Value	Level of Significance
None	0	00.00	3	5.08		
One	6	10.34	4	6.78		
Two	10	17.24	6	10.17		
Three	6	10.34	5	8.47		
Four	6	10.34	6	10.17		
Five	4	6.90	6	10.17		
Six	0	00.00	7	11.86		
Seven	2	3.45	1	1.69		
Eight	3	5.17	5	8.47		
Ten	8	13.79	6	10.17		
Twelve	2	3.45	5	8.47		
Fourteen	1	1.72	0	00.00		
Fifteen	0	00.00	1	1.69		
Twenty	1	1.72	1	1.69		
Twenty-five	4	6.90	1	1.69		
Thirty	2	3.45	1	1.69		
Fifty	2	3.45	1	1.69		
Ninety-nine	1	1.72	0	00.00		
Total[a]	58	99.98	59	99.95	19.755	0.2869

[a]Totals do not equal 100 percent due to rounding.

TABLE XVII

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF APPRENTICE RELATIONSHIPS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING OUTSIDE THE EDUCATIONAL ARENA

Number of Relationships	Engineering (N=69) N	%	Home Economics (N=83) N	%	Chi-Square Values	Level of Significance
None	47	68.12	59	71.08		
One	9	13.04	6	7.23		
Two	4	5.80	9	10.84		
Three	1	1.45	3	3.61		
Four	2	2.90	0	00.00		
Five	1	1.45	4	4.82		
Eight	2	2.90	0	00.00		
Nine	0	00.00	1	1.20		
Ten	1	1.45	0	00.00		
Twenty	2	2.90	0	00.00		
Fifty	0	00.00	1	1.20		
Total[a]	69	100.01	83	99.98	14.515	0.1508

[a]Totals do not equal 100 percent due to rounding.

TABLE XVIII

MEANS REPRESENTING THE TOTAL NUMBER OF APPRENTICE RELATIONSHIPS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

	Engineering			Home Economics		
Variable	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Relationships Within Education	58	10.74	16.05	59	7.36	8.01
Relationships Outside Education	69	1.43	3.79	83	1.35	5.63

9. instigator of the one most important apprentice relationship within the educational arena,

10. number of years into the mentor's career at the onset of the one most important apprentice relationship within the educational arena,

11. tenure of the one most important apprentice relationship within the educational arena,

12. cause for termination of the one most important apprentice relationship within the educational arena,

13. mentoring functions performed in the one most important apprentice relationship within the educational arena.

Respondents were instructed to assess various characteristics of their first apprentice relationship. Table XIX presents the chi-square value and percentage distributions representing the number of years into the mentor's career at the onset of the relationship. No significant differences were found to exist.

Data regarding the age of both the mentor and the apprentice are presented in Table XX. Again, no significant differences were found. Examination of means (Table XXI) further illustrates these findings with approximately 34 years as mean age of the mentor and slightly over 24 years as mean age of the apprentice.

Through narrative response, the administrators described ways in which they served as a mentor. Appendix C presents a representative sample of responses, however, both groups tended to emphasize their roles as teacher, sponsor, counselor, or role model. Engineers were more likely to respond with basic professional activities performed and often included reference to their role as graduate adviser.

TABLE XIX

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS REPRESENTING THE NUMBER OF YEARS INTO THE MENTOR'S CAREER AT THE ONSET OF THE FIRST APPRENTICE RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Years Into Career	Engineering (N=77)		Home Economics (N=90)		Chi-Square Value	Level of Significance
	B	%	N	%		
0-5	39	50.65	37	41.11		
6-10	14	18.18	34	37.78		
11-15	20	25.97	15	16.67		
16-20	3	3.90	3	3.33		
More than 20	1	1.30	1	1.11		
Total	77	100.00	90	100.00	8.138	0.0867

TABLE XX

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS REPRESENTING THE AGE OF THE MENTOR AND APPRENTICE AT THE ONSET OF THE FIRST APPRENTICE RELATIONSHIP

Age	Engineering N	Engineering %	Home Economics N	Home Economics %	Chi-Square Values	Level of Significance
Mentor						
20-29	14	18.18	23	26.74		
30-39	48	62.34	44	51.16		
40-49	14	18.18	19	22.09		
50-59	1	1.30	0	00.00		
Total[a]	77	100.00	86	99.99	3.635	0.3037
Apprentice						
10-19	5	6.67	7	8.64		
20-29	60	80.00	58	71.60		
30-39	10	13.33	15	18.52		
40-49	0	00.00	1	1.23		
Total[a]	75	100.00	81	99.99	2.140	0.5439

[a]Totals do not equal 100 percent due to rounding.

TABLE XXI

MEAN AGE OF THE MENTOR AND APPRENTICE AT THE ONSET OF THE FIRST APPRENTICE RELATIONSHIP

	Engineering			Home Economics		
Age	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Mentor	77	34.00	5.72	86	33.28	6.55
Apprentice	75	24.29	4.16	81	24.74	5.08

Several questions were designed to assess characteristics observed in the one most important apprentice relationship in the educational arena. Table XXII presents the chi-square values and percentage distributions for the characteristics of sex, age of mentor, age of apprentice, relationship between mentor and apprentice, and academic position of apprentice. Mean ages of mentor and apprentice are presented in Table XXIII.

Significant differences were found between the two groups of administrators when analyzing sex of the apprentice. Nearly all of the engineering administrators identified a male apprentice (97.32%), while over three-fourths of the administrators in home economics identified a female apprentice (76.92%).

Examination into the age variable for both mentor and apprentice at the onset of the most important apprentice relationship produced no significant differences with regard to age of the mentor. Over 40 percent of both groups recalled their age somewhere between 30-39 years with the mean age varying between 38-39 years. Significant differences, however, were found in regard to the age of the apprentice. More than 70 percent (72.06%) of the engineers identified an apprentice between 20-29 years, whereas just slightly over half (53.62%) of the home economists were mentoring individuals in this age group. Over one-third of the home economists identified an apprentice who was slightly older, 30-39 years. The mean apprentice age for engineering administrators was 25 years, while for home economists it was nearly 28 years (Table XXIII).

In response to the question regarding the relationship of mentor to apprentice, no significant differences were found as nearly 30 percent of

TABLE XXII

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF SEX, AGE, RELATIONSHIP, AND ACADEMIC POSITION WITHIN THE MOST IMPORTANT APPRENTICE RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Variable	Engineering N	Engineering %	Home Economics N	Home Economics %	Chi-Square Values	Level of Significance
Sex						
Male	70	97.22	18	23.08		
Female	2	2.78	60	76.92		
Total	72	100.00	78	100.00	84.881	0.0001
Age of Mentor						
20-29	6	8.70	5	6.85		
30-39	31	44.93	31	42.47		
40-49	26	37.68	29	39.73		
50-59	6	8.70	7	9.59		
60 or more	0	00.00	1	1.37		
Total[a]	69	100.01	73	100.01	1.220	0.8748
Age of Apprentice						
10-19	6	8.82	4	5.80		
20-29	49	72.06	37	53.62		
30-39	9	13.24	24	34.78		
40-49	3	4.41	4	5.80		
50-59	1	1.47	0	00.00		
Total	68	100.00	69	100.00	10.029	0.0399
Relationship						
Professor/Graduate Committee Member	21	29.17	19	24.36		
Associate/Dean	1	1.39	8	10.26		
Supervisor/Administrator	3	4.17	11	14.10		
Highschool Teacher	0	00.00	1	1.28		
Graduate Adviser	20	27.78	23	29.49		
Head of Research Project	6	8.33	3	3.85		
Colleague/Professional Peer	5	6.94	2	2.56		
Undergraduate Adviser	5	6.94	2	2.56		
Department Head	11	15.28	9	11.54		
Total	72	100.00	78	100.00	14.880	0.0615
Academic Position						
Graduate Student	32	44.44	40	51.28		
Associate Dean	1	1.39	2	2.56		
Instructor/Assistant Associate Professor	18	25.00	14	17.95		
Undergraduate Student	11	15.28	8	10.26		
Research Assistant	6	8.33	5	6.41		
Colleague/Professional Peer	1	1.39	1	1.28		
Administrative Assistant	1	1.39	2	2.56		
Director of Federal Project/Extension Personnel	1	1.39	3	3.85		
Highschool Student	0	00.00	1	1.28		
Department Head	1	1.39	2	2.56		
Total[a]	72	100.00	78	99.99	4.721	0.8579

[a]Totals do not equal 100 percent due to rounding.

TABLE XXIII

MEAN AGE OF MENTOR AND APPRENTICE IN THE MOST IMPORTANT APPRENTICE RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

	Engineering			Home Economics		
Age	N	Mean	Standard Deviation	N	Mean	Standard Deviation
Mentor	69	38.17	7.29	73	39.41	8.06
Apprentice	68	25.54	6.23	69	27.86	6.31

the administrators in engineering and 25 percent of the administrators in home economics recalled their status as professor or graduate committee member. Almost another 30 percent of both groups (27.78% engineers, 29.49% home economists) were in the role of graduate adviser at the time of the one most important apprentice relationship in the educational arena.

No significant differences were found when examining the academic position of the apprentice at the onset of the one most important apprentice relationship in the educational arena. More than 40 percent of the engineering administrators (44.44%) and 50 percent of the home economics administrators (51.28%) identified their apprentice at the graduate student level.

Results of the chi-square tests and percentage distributions are presented in Table XXIV for the four characteristics, number of years into mentor's career at the onset of the relationship, instigator of the relationship, length of the relationship, and cause of termination of the relationship.

No significant differences were found between the two groups of administrators regarding the number of years into their careers at the onset of the one most important apprentice relationship in the educational arena. Data regarding the instigator of the relationship also revealed no statistically significant differences.

Of the respondents whose apprentice relationship had terminated, no significant differences were found in reference to the length of association. The mean length for apprentice relationships was found to fall between four and five years (Table XXV).

TABLE XXIV

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS OF SELECTED CHARACTERISTICS WITHIN THE MOST IMPORTANT APPRENTICE RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Variable	Engineering N	Engineering %	Home Economics N	Home Economics %	Chi-Square Values	Level of Significance
Number of Years Into Career						
0-5	17	24.29	17	21.79		
6-10	16	22.86	19	24.36		
11-15	16	22.86	15	19.23		
16-20	15	21.43	13	16.67		
Over 20	6	8.57	14	17.95		
Total[a]	70	100.01	78	100.00	3.209	0.5234
Instigator of Relationship						
Mentor	28	38.89	25	32.05		
Apprentice	17	23.61	22	28.21		
Mutual	23	31.94	28	35.90		
Cannot Identify	4	5.56	3	3.85		
Total[a]	72	100.00	78	100.01	1.206	0.7516
Length of Relationship						
1-4 years	14	40.00	12	60.00		
5-9 years	15	42.86	6	30.00		
10-14 years	5	14.29	2	10.00		
15-19 years	0	00.00	0	00.00		
20-24 years	1	2.86	0	00.00		
Total[a]	35	100.01	20	100.00	2.383	0.4968
Cause of Termination						
Maturation	5	13.89	3	13.64		
Departure of Mentor	6	16.67	5	22.73		
Graduation and Departure of Apprentice	22	61.11	10	45.45		
Apprentice Changed College within University	1	2.78	1	4.55		
Departure of Apprentice not Necessarily Due to Graduation	2	5.56	2	9.09		
Other	0	00.00	1	1.72		
Total[a]	36	100.01	22	97.18	2.879	0.7186

[a]Totals do not equal 100 percent due to rounding.

TABLE XXV

MEAN LENGTH OF THE MOST IMPORTANT APPRENTICE RELATIONSHIP INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

	N	Mean	Standard Deviation
Engineers	35	5.83	3.96
Home Economists	20	4.55	2.80

More than 60 percent of the engineers (61.11%) and 45 percent of the home economists (45.45%) recognized termination of the relationship as due to the graduation and subsequent departure of the apprentice. No significant differences were found between the two groups on this variable.

Levinson's (1978) six mentoring functions were used to assess respondent's descriptors of their role in the apprentice relationship. Table XXVI presents the results of the chi-square test and percentage distributions for each of these six functions.

No significant differences were found for the variables teacher, exemplar, and counselor, suggesting that respondents recognized these variables as functions they performed in their role as mentor. The variables of sponsor, host and guide, and realization of the dream demonstrated statistically significant differences. Three-fourths (74.32%) of the home economists identified the sponsor function as a role performed in their apprentice relationship. Engineers, however, were very nearly evenly divided on this variable (56.94% no, 43.06% yes). Home economists were also more likely to identify the host and guide function within their relationships (63.64%), while only one-third of the engineers (33.33%) recognized this variable as a descriptor. In regard to the variable realization of the dream, home economists were found to be quite evenly divided as 48.05 percent recognized this function as one performed in their apprentice relationships and 51.95 percent did not. Only one-fourth of the engineers however, could attribute this variable to their role as mentor.

Representative responses addressing various aspects of the apprentice relationship and personal characteristics of the respondent as

TABLE XXVI

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS REPRESENTING MENTORING FUNCTIONS INDICATED BY ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING (ROLE OF MENTOR)

	Engineering						Home Economics						Chi-Square Value	Level of Significance
	Yes		No		Total		Yes		No		Total			
	N	%	N	%	N	%	N	%	N	%	N	%		
Teacher	60	83.33	12	16.67	72	100.00	65	84.42	12	15.58	77	100.00	0.032	0.8575
Sponsor	41	56.94	31	43.06	72	100.00	58	75.32	19	24.68	77	100.00	5.638	0.0176
Host and Guide	24	33.33	48	66.67	72	100.00	49	63.64	28	36.36	77	100.00	13.672	0.0002
Exemplar	47	65.28	25	34.72	72	100.00	61	79.22	16	20.78	77	100.00	3.627	0.0569
Counselor	59	81.94	13	18.06	72	100.00	63	81.82	14	18.18	77	100.00	0.000	0.9840
Realization of the Dream	18	25.00	54	75.00	72	100.00	37	48.05	40	51.95	77	100.00	8.491	0.0036

mentor are presented in the words of the respondents in Appendix C. In general, both groups tended to recall a relationship initiated through their association as adviser or supervisor. Several respondents, more often home economists, provided fewer literal responses suggesting rather that the relationship developed slowly, naturally, through mutual interests and frequent interaction.

In describing the relationship, many respondents again referred to the collegial aspects of adviser/student, however, others made reference to the nature of the association. Again responses elicited from home economists were likely to suggest a personal involvement.

Regarding characteristics necessary for their role as mentor, responses were extremely diverse, although both groups tended to draw upon Levinson's descriptors as adjectives in describing their role as mentor. Other common responses centered around the experience, expertise, and reputation that respondents felt able to contribute to the relationship.

Perceived Importance of Mentoring in Administrative Advancement

Part III of the questionnaire was used to determine if the responses of home economics administrators were different from those of engineering administrators with respect to the perceived importance of mentoring relationships in one's advancement within higher education administration.

The overall importance of the mentoring relationship in academic administrative advancement was tested by the hypothesis that there are no differences between responses of administrators in home economics and

administrators in engineering with regard to the importance of the mentoring relationship in one's advancement within academic administration.

As demonstrated in Table XXVII nearly half of the administrators in home economics (41.18%) indicated that the mentoring relationship was very important in the advancement of administrators in higher education whereas fewer than one-third (27.14%) of the engineering respondents regarded mentoring as very important. In both cases respondents perceived the relationship to be important (38.57% engineers, 42.86% home economists). Significant differences were found to exist between the two groups and the null hypothesis was rejected.

Two items within this section of the questionnaire were open-ended and required a narrative response. Appendix C includes a representation of the responses provided by the administrators in their own words. In reference to the effect of a mentoring relationship on one's advancement in higher education administration, the responses of home economics administrators varied from "no effect" to "it is of utmost importance." In general however, many indicated that the mentoring relationship was a way of providing help and of speeding up the advancement process. Responses of engineers were also quite varied although it did appear that in general these administrators also considered a mentor as one way to "make the advancement easier."

When asked what activities a mentor performed which would prove beneficial within the realm of academic administration, both the home economics administrators and the administrators in engineering tended to respond with positive comments in reference to role modeling, guiding, and counseling.

TABLE XXVII

CHI-SQUARE VALUE AND PERCENTAGE DISTRIBUTIONS REPRESENTING THE IMPORTANCE OF MENTORING RELATIONSHIPS IN ACADEMIC ADMINISTRATIVE ADVANCEMENT (ENGINEERING/HOME ECONOMICS)

Variable	Engineering (N=140) N	%	Home Economics (N=119) N	%	Chi-Square Value	Level of Significance
Very Important	38	27.14	49	41.18		
Important	54	38.57	51	42.86		
Not Important	48	34.29	19	15.97		
Total[a]	140	100.00	119	100.01	12.408	0.0020

[a]Total does not equal 100 percent due to rounding.

Comparison of Male and Female Administrators

A part of the original purpose of the study included an investigation into the sex of both mentors and apprentices. As responding administrators in engineering were all male, the researcher looked to the administrators in home economics for comparisons in regard to sex. Of the 119 responding home economics administrators 40 (33.61%) were male and 79 (66.39%) were female.

The hypotheses tested in order to achieve this comparison were the same as those used to compare home economists and engineers. Chi-square values and percentage distributions for the individual items representing the respondent in the role of apprentice are presented in Table XXVIII. Table XXIX illustrates means for the relevant variables.

Respondent in the Role of Apprentice

Significant differences were found to exist between the two groups with respect to sex of the mentor and Levinson's sponsor descriptor. As evidenced by Table XXVIII mentoring relationships with the same sex were more common than mentoring relationships with the opposite sex among administrators in home economics. More than three-fourths of the respondents identified mentors of the same sex as themselves. Seventy-nine percent of the males identified a male mentor and 76 percent of the females identified a female mentor.

Significant differences were also found between the sexes in regard to the sponsor mentoring function identified by Levinson (1978). Male respondents were evenly divided as 50 percent identified this variable as a descriptor evident within their most important mentoring relationship in the educational arena. More than three-fourths (79.37%)

TABLE XXVIII

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS FOR INDIVIDUAL ITEMS REPRESENTING RESPONSES OF HOME ECONOMICS ADMINISTRATORS IN THE ROLE OF APPRENTICE

Variable	Males N	Males %	Females N	Females %	Chi-Square Values	Level of Significance
		All Mentoring Relationships				
Current Mentoring Relationships						
Yes	10	25.00	33	41.77		
No	30	75.00	46	58.23		
Total	40	100.00	79	100.00	3.237	0.0720
Past Mentoring Relationships						
Yes	28	70.00	63	79.75		
No	12	30.00	16	20.25		
Total	40	100.00	79	100.00	1.402	0.2364
Number of Relationships Within Education						
None	2	7.41	1	1.85		
One	6	22.22	9	16.67		
Two	7	25.93	13	24.07		
Three	5	18.52	18	33.33		
Four	4	14.81	5	9.26		
Five or more	3	11.11	8	14.81		
Total[a]	27	100.00	54	99.99	3.898	0.5642
Number of Relationships Outside Education						
None	15	53.57	38	63.33		
One	5	17.86	13	21.67		
Two	6	21.43	6	10.00		
Three or more	2	7.14	3	5.00		
Total	28	100.00	60	100.00	2.420	0.4899
Level of Career Development at the Onset of First Relationship						
Undergraduate	16	57.14	24	36.92		
Master's	3	10.71	17	26.15		
Doctoral	6	21.43	9	13.85		
On the Job/Professional	3	10.71	12	18.46		
Other	0	00.00	3	4.62		
Total[a]	28	99.99	65	100.00	6.748	0.1498
Age of Mentor						
20-29	0	00.00	3	4.92		
30-39	6	22.22	10	16.39		
40-49	10	37.04	27	44.26		
50-59	10	37.04	15	24.59		
60-69	1	3.70	5	8.20		
70-79	0	00.00	1	1.64		
Total	27	100.00	61	100.00	3.927	0.5599
Age of Apprentice						
10-19	7	25.00	16	24.62		
20-29	19	67.86	35	53.85		
30-39	2	7.14	11	16.92		
40-49	0	00.00	3	4.62		
Total[a]	28	100.00	65	100.01	3.294	0.3484
		Most Important Mentoring Relationship Within Education				
Sex of Mentor						
Male	19	79.17	15	23.81		
Female	5	20.83	48	76.19		
Total	24	100.00	63	100.00	22.370	0.0001

TABLE XXVIII (Continued)

Variable	Males N	Males %	Females N	Females %	Chi-Square Values	Level of Significance
Age of Apprentice						
10-19	3	13.04	4	6.35		
20-29	16	69.57	29	46.03		
30-39	4	17.39	21	33.33		
40-49	0	00.00	9	14.29		
Total	23	100.00	63	100.00	7.470	0.0583
Age of Mentor						
20-29	0	00.00	2	3.33		
30-39	5	22.73	8	13.33		
40-49	7	31.82	24	40.00		
50-59	7	31.82	22	36.67		
60-69	3	13.64	3	5.00		
70-79	0	00.00	1	1.67		
Total[a]	22	100.01	60	100.00	4.029	0.5452
Relationship						
Undergraduate Student	5	20.83	8	12.70		
Colleague/Professional Peer/Friend	2	8.33	8	12.70		
Faculty Member	3	12.50	7	11.11		
Neighbor	1	4.17	0	00.00		
Graduate Student	10	41.67	25	39.68		
Department Head	1	4.17	4	6.35		
Assistant	0	00.00	2	3.17		
Highschool Student	0	00.00	1	1.59		
Associate Dean	0	00.00	0	00.00		
Employee/Extension Personnel	1	4.17	6	9.52		
Member of Professional Group or Committee	0	00.00	2	3.17		
Highschool Teacher	1	4.17	0	00.00		
Total[a]	24	100.01	63	99.99	9.023	0.5300
Academic Position						
Member of Faculty	14	58.33	21	33.87		
Assistant/Associate Dean or Higher	3	12.50	17	27.42		
Department Head	5	20.83	17	27.42		
Other	2	8.33	7	11.29		
Total	24	99.99	62	100.00	4.638	0.2003
Level of Career Development						
Undergraduate	6	25.00	8	12.70		
Masters	5	20.83	12	19.05		
Doctoral	4	16.67	15	23.81		
On the Job/Professional	8	33.33	27	42.86		
Other	1	4.17	1	1.59		
Total	24	100.00	63	100.01	2.964	0.5639
Instigator of the Relationship						
Mentor	6	25.00	25	39.68		
Apprentice	7	29.17	12	19.05		
Mutual	9	37.50	25	39.68		
Cannot Identify	2	8.33	1	1.59		
Total	24	100.00	63	100.00	4.181	0.2426

TABLE XXVIII (Continued)

Variable	Males N	Males %	Females N	Females %	Chi-Square Values	Level of Significance
Length of Relationship						
1-4 years	8	47.06	7	21.21		
5-9 years	7	41.18	8	24.24		
10-14 years	1	00.00	8	24.24		
15-19 years	1	5.88	6	18.18		
20-24 years	1	5.88	1	3.03		
25-29 years	0	00.00	2	6.06		
30-34 years	0	00.00	1	3.03		
Total[a]	18	100.00	33	99.99	8.945	0.1767
Cause of Termination						
Graduation of Apprentice	3	17.65	2	5.88		
Maturation	1	5.88	6	17.65		
Geographical Move of Apprentice	6	35.29	6	17.65		
Retirement of Mentor	1	5.88	5	14.71		
Death of Mentor	2	11.76	12	35.29		
Apprentice Bypassed Mentor/ Bad Feelings	1	5.88	1	2.94		
Mutual Change of Employment	3	17.65	2	5.88		
Departure of Mentor	0	00.00	0	00.00		
Total[a]	17	99.99	34	100.00	9.129	0.1665
Levinson's Functions						
Teacher						
Yes	20	83.33	50	79.37		
No	4	16.67	13	20.63		
Total	24	100.00	63	100.00	0.174	0.6765
Sponsor						
Yes	12	50.00	50	79.37		
No	12	50.00	13	20.63		
Total	24	100.00	63	100.00	7.318	0.0068
Host and Guide						
Yes	13	54.17	41	65.08		
No	11	45.83	22	34.92		
Total	24	100.00	63	100.00	0.879	0.3485
Exemplar						
Yes	21	87.50	56	88.89		
No	3	12.50	7	11.11		
Total	24	100.00	63	100.00	0.033	0.8559
Counselor						
Yes	20	83.33	53	84.13		
No	4	16.67	10	15.87		
Total	24	100.00	63	100.00	0.008	0.9283
Realization of the Dream						
Yes	10	41.67	32	50.79		
No	14	58.33	31	49.21		
Total	24	100.00	63	100.00	0.580	0.4464

[a]Totals do not equal 100 percent due to rounding.

TABLE XXIX

MEANS FOR ITEMS REPRESENTING RESPONSES OF HOME ECONOMICS ADMINISTRATORS IN THE ROLE OF APPRENTICE

Variable	Males N	Males Mean	Males Standard Deviation	Females N	Females Mean	Females Standard Deviation
All Mentoring Relationships						
Number of Relationships Within Education	27	3.37	5.17	54	3.06	2.08
Number of Relationships Outside Education	28	0.86	1.11	60	0.63	1.09
Age of Mentor	27	44.60	8.48	65	44.71	9.85
Age of Apprentice	28	22.25	4.38	61	24.23	6.77
Most Important Mentoring Relationship Within Education						
Age of Apprentice	23	24.96	5.70	63	29.54	7.72
Age of Mentor	22	47.09	9.32	60	46.60	9.20
Length of Relationship	17	4.88	3.55	33	11.00	7.76

of the female respondents recognized this as one of the roles performed by their mentor.

Interesting results were found when examining the mean length of the most important mentoring relationship within the educational arena. Although significance was not reached, male administrators were found to be involved in a mentoring relationship for an average of 4.8 years, while female administrators averaged 11 years per relationship (Table XXIX).

Respondent in the Role of Mentor

Significant differences were found to exist between male and female administrators in home economics with regard to the number of apprentice relationships within the educational arena and sex of the apprentice in the most important apprentice relationship within the educational arena.

In general, more female administrators identified apprentice relationships within education than did male administrators (Table XXX). The means (Table XXXI) support this data, as the males averaged 6.19 apprentice relationships, while females averaged 8 such relationships.

When considering the sex of the apprentice in the one most important apprentice relationship within the educational arena, same sex relationships prevailed. More than two-thirds (66.67%) of the males identified a male apprentice, and nearly all (96.30%) of the female administrators were found to be mentoring females.

TABLE XXX

CHI-SQUARE VALUES AND PERCENTAGE DISTRIBUTIONS FOR INDIVIDUAL ITEMS REPRESENTING RESPONSES OF HOME ECONOMICS ADMINISTRATORS IN THE ROLE OF MENTOR

Variable	Males N	Males %	Females N	Females %	Chi-Square Values	Level of Significance
			All Mentoring Relationships			
Current Mentoring Relationships						
Yes	23	57.50	45	57.69		
No	17	42.50	33	42.31		
Total	40	100.00	77	100.00	0.000	0.9840
Past Mentoring Relationships						
Yes	29	72.50	60	76.92		
No	11	27.50	18	23.08		
Total	40	100.00	78	100.00	0.279	0.5973
Number of Relationships Within Education						
None	3	14.29	0	00.00		
One	0	00.00	4	10.53		
Two	3	14.29	3	7.89		
Three	2	9.52	3	7.89		
Four	1	4.76	5	13.16		
Five	4	19.05	2	5.26		
Six	0	00.00	7	18.42		
Seven	0	00.00	1	2.63		
Eight	2	9.52	3	7.89		
Ten	1	4.76	5	13.16		
Twelve	4	19.05	1	2.63		
Fifteen	0	00.00	1	2.63		
Twenty	1	4.76	0	00.00		
Twenty-five	0	00.00	1	2.63		
Thirty	0	00.00	1	2.63		
Fifty	0	00.00	1	2.63		
Total[a]	21	100.00	38	99.98	25.411	0.0447
Number of Relationships Outside Education						
None	17	62.96	42	75.00		
One	3	11.11	3	5.36		
Two	3	11.11	6	10.71		
Three	2	7.41	1	1.79		
Five	1	3.70	3	5.36		
Nine	1	3.70	0	00.00		
Fifty	0	00.00	1	1.79		
Total[a]	27	99.99	56	100.01	5.461	0.4862
Years Into Career at the Onset of First Relationship						
0-5	10	34.48	27	44.26		
6-10	12	41.38	22	36.07		
11-15	6	20.69	9	14.75		
16-20	1	3.45	2	3.28		
More than 20	0	00.00	1	1.64		
Total	29	100.00	61	100.00	1.497	0.8272
Age of Mentor						
20-29	5	17.86	18	31.03		
30-39	17	60.71	27	46.55		
40-49	6	21.43	13	22.41		
50-59	0	00.00	0	00.00		
Total[a]	28	100.00	58	99.99	1.975	0.3726
Age of Apprentice						
10-19	1	3.57	6	11.32		
20-29	20	71.43	38	71.70		
30-39	7	25.00	8	15.09		
40-49	0	00.00	1	1.89		
Total	28	100.00	53	100.00	2.772	0.4281

TABLE XXX (Continued)

Variable	Males N	Males %	Females N	Females %	Chi-Square Values	Level of Significance
Most Important Apprentice Relationship Within Education						
Sex of Apprentice						
Male	16	66.67	2	3.70		
Female	8	33.33	52	96.30		
Total	24	100.00	54	100.00	37.106	0.0001
Age of Mentor						
20-29	1	4.35	4	8.00		
30-39	13	56.52	18	36.00		
40-49	7	30.43	22	44.00		
50-59	2	8.70	5	10.00		
60-69	0	00.00	1	2.00		
Total	23	100.00	50	100.00	3.087	0.5434
Age of Apprentice						
10-19	0	00.00	4	8.70		
20-29	14	60.87	23	50.00		
30-39	8	34.78	16	34.78		
40-49	1	4.35	3	6.52		
Total	23	100.00	46	100.00	2.463	0.4820
Relationship						
Professor/Graduate Committee Member	7	29.17	12	22.22		
Associate/Dean	3	12.50	5	9.26		
Supervisor/Administrator	1	4.17	10	18.52		
Highschool Teacher	0	00.00	1	1.85		
Graduate Adviser	4	16.67	19	35.19		
Head of Research Project	2	8.33	1	1.85		
Colleague/Professional Peer	1	4.17	1	1.85		
Undergraduate Adviser	2	8.33	0	00.00		
Department Head	4	16.67	5	9.26		
Total[a]	24	100.01	54	100.00	12.784	0.1206
Academic Position						
Graduate Student	10	41.67	30	55.56		
Associate Dean	1	4.17	1	1.85		
Instructor/Assistant/Associate Professor	5	20.83	9	16.67		
Undergraduate Student	3	12.50	5	9.26		
Research Assistant	3	12.50	2	3.70		
Colleague/Professional Peer	0	00.00	1	1.85		
Administrative Assistant	1	4.17	1	1.85		
Director of Federal Project/ Extension Personnel	1	4.17	2	3.70		
Highschool Student	0	00.00	1	1.85		
Department Head	0	00.00	2	3.70		
Total[a]	24	100.01	54	99.99	5.443	0.7941
Number of Years Into Career						
0-5	5	20.83	12	22.22		
6-10	7	29.17	12	22.22		
11-15	7	29.17	8	14.81		
16-20	3	12.50	10	18.52		
Over 20	2	8.33	12	22.22		
Total[a]	24	100.00	54	99.99	4.270	0.3707
Instigator of Relationship						
Mentor	7	29.17	18	33.33		
Apprentice	6	25.00	16	29.63		
Mutual	11	45.83	17	31.48		
Cannot Identify	0	00.00	3	5.56		
Total	24	100.00	54	100.00	2.503	0.4748

TABLE XXX (Continued)

Variable	Males N	Males %	Females N	Females %	Chi-Square Values	Level of Significance
Length of Relationship						
1-4 years	3	42.86	9	69.23		
5-9 years	4	57.15	2	15.38		
10-14 years	0	00.00	2	15.38		
Total[a]	7	100.00	13	99.99	4.249	0.1195
Cause of Termination						
Maturation	2	25.00	1	7.14		
Departure of Mentor	3	37.50	2	14.29		
Graduation and Departure of Apprentice	2	25.00	8	57.14		
Apprentice Changed College Within University	0	00.00	1	7.14		
Departure of Apprentice Not Necessarily Due to Graduation	0	00.00	2	14.29		
Other	1	12.50	0	00.00		
Total	8	100.00	14	100.00	7.019	0.2192
Levinson's Functions						
Teacher						
Yes	20	83.33	45	84.91		
No	4	16.67	8	15.09		
Total	24	100.00	53	100.00	0.031	0.8601
Sponsor						
Yes	17	70.83	41	77.36		
No	7	29.17	12	22.64		
Total	24	100.00	53	100.00	0.378	0.5384
Host and Guide						
Yes	13	54.17	36	67.92		
No	11	45.83	17	32.08		
Total	24	100.00	53	100.00	1.351	0.2451
Exemplar						
Yes	18	75.00	43	81.13		
No	6	25.00	10	18.87		
Total	24	100.00	53	100.00	0.377	0.5390
Counselor						
Yes	20	83.33	43	81.13		
No	4	16.67	10	18.87		
Total	24	100.00	53	100.00	0.054	0.8166
Realization of the Dream						
Yes	9	37.50	28	52.83		
No	15	62.50	25	47.17		
Total	24	100.00	53	100.00	1.555	0.2124

[a]Totals do not equal 100 percent due to rounding.

TABLE XXXI

MEANS FOR ITEMS REPRESENTING RESPONSES OF HOME ECONOMICS ADMINISTRATORS IN THE ROLE OF MENTOR

Variable	Males N	Males Mean	Males Standard Deviation	Females N	Females Mean	Females Standard Deviation
All Mentoring Relationships						
Number of Relationships Within Education	21	6.19	5.22	38	8.00	9.20
Number of Relationships Outside Education	27	1.07	2.04	56	1.48	6.73
Age of Mentor	28	33.75	5.71	58	33.05	6.95
Age of Apprentice	28	24.71	4.28	53	24.76	5.50
Most Important Apprentice Relationship Within Education						
Age of Mentor	23	37.65	8.35	50	40.22	7.87
Age of Apprentice	23	26.87	5.69	46	28.35	6.60
Length of Relationship	7	4.57	0.98	13	4.54	3.46

Perceived Importance of Mentoring
in Administrative Advancement

As evidenced in Table XXXII no significant differences were apparent between the two sexes of administrators concerning the perceived importance of mentoring relationships to the advancement of administrators in academic administration. The male administrators were fairly evenly dispersed with the greatest number (37.50%) indicating the relationship as important, while female administrators were more inclined to regard the relationship as either important (45.57%) or very important (44.30%). Based on this data the hypothesis could not be rejected.

Identification of the Mentoring Role

Respondents were asked to specify at what time in their educational or career development they first identified mentoring for the kind of relationship it is recognized to be. Table XXXIII presents the percentage distributions for the data.

Of the 140 engineering respondents, 48 (34.29%) identified mentoring while they were students as compared to 46 of the 119 home economics respondents (38.66%). The majority of both groups indicated recognition in graduate school (63.33% engineers, 51.43% home economists).

Fifty-six (40%) of the engineers and 55 (46.22%) of the home economists recognized the mentoring relationship while on the job. Responses from both groups were widely dispersed (from 1 to 30 years). The means (Table XXXIV) indicate that both groups averaged slightly more

TABLE XXXII

CHI-SQUARE VALUE AND PERCENTAGE DISTRIBUTIONS REPRESENTING THE IMPORTANCE OF MENTORING RELATIONSHIPS IN ACADEMIC ADMINISTRATIVE ADVANCEMENT (MALE/FEMALE)

Variable	Males (N=40) N	%	Females (N=79) N	%	Chi-Square Value	Level of Significance
Very Important	14	35.00	35	44.30		
Important	15	37.50	36	45.57		
Not Important	11	27.50	8	10.13		
Total	40	100.00	79	100.00	5.982	0.0502

TABLE XXXIII

PERCENTAGE DISTRIBUTIONS REPRESENTING THE LEVEL OF EDUCATIONAL DEVELOPMENT OR YEARS ON THE JOB WHEN THE MENTORING PROCESS WAS FIRST IDENTIFIED

Variable	Engineering N	Engineering %	Home Economics N	Home Economics %
Student	48	100.00	46	100.00
Level				
Junior High	0	00.00	1	2.86
High School	0	00.00	2	5.71
Undergraduate	11	36.67	14	40.00
Graduate	19	63.33	18	51.43
Total	30[a]	100.00	35[a]	100.00
Number of Years				
One	3	6.98	5	11.11
Two	4	9.30	8	17.78
Three	2	4.65	6	13.33
Four	3	6.98	3	6.67
Five	7	16.28	6	13.33
Six	5	11.63	0	00.00
Eight	3	6.98	1	2.22
Ten	11	25.58	5	11.11
Eleven	0	00.00	2	4.44
Twelve	1	2.33	0	00.00
Fifteen	2	4.65	4	8.89
Twenty	0	00.00	4	8.89
Twenty-two	1	2.33	0	00.00
Twenty-five	0	00.00	1	2.22
Thirty	1	2.33	0	00.00
Total[b]	43[a]	100.02	45[a]	99.99

[a]Not all respondents indicated a level or number of years.

[b]Totals do not equal 100 percent due to rounding.

TABLE XXXIV

MEAN YEARS ON THE JOB WHEN THE MENTORING PROCESS WAS FIRST IDENTIFIED

	N	Mean	Standard Deviation
Engineers	43	7.49	5.56
Home Economists	45	7.24	6.50

than seven years on the job at point of recognition (7.49 engineers, 7.24 home economists).

When analyzing this question by sex of administrator Table XXXV illustrates that more of the responding administrators of both sexes recognized the mentoring relationship on the job (47.50% males, 45.57% females) than as a student (30% males, 43% females). Eighteen administrators did not respond to this question. The means (Table XXXVI) suggest that females were slightly later to recognize this relationship than males (7.67 years on the job, females; 6.61 years on the job, males).

Responses of Total Group of Participants

An analysis of overall means and frequencies for the complete sample could provide information describing the academic mentoring relationship in general. A discussion of the overall results follows.

Respondent in the Role of Apprentice

The frequency data for the following comparisons are presented in Table XXXVII with the means appearing in Table XXXVIII. When examining the current mentoring involvement of participating administrators, only 27 percent could currently identify a mentoring relationship, however nearly two-thirds (64.73%) were able to acknowledge an individual who, although the relationship had terminated, had served as a mentor in the past.

For those respondents who either are now or were previously involved in a mentoring relationship, approximately 97 percent were within education. More than half (55.15%) could identify no relationships at

TABLE XXXV

PERCENTAGE DISTRIBUTIONS REPRESENTING THE LEVEL OF EDUCATIONAL DEVELOPMENT OR YEARS ON THE JOB WHEN THE MENTORING PROCESS WAS FIRST IDENTIFIED BY HOME ECONOMICS ADMINISTRATORS

Variable	Males N	Males %	Females N	Females %
Student	12	100.00	34	100.00
Level				
Junior High	1	10.00	0	00.00
High School	0	00.00	2	8.00
Undergraduate	5	50.00	9	36.00
Graduate	4	40.00	14	56.00
Total	10[a]	100.00	25[a]	100.00
On the Job	19	100.00	36	100.00
Number of Years				
One	2	11.11	3	11.11
Two	2	11.11	6	22.22
Three	3	16.67	3	11.11
Four	1	5.56	2	7.41
Five	2	11.11	4	14.81
Eight	1	5.56	0	00.00
Ten	3	16.67	2	7.41
Eleven	2	11.11	0	00.00
Fifteen	2	11.11	2	7.41
Twenty	0	00.00	4	14.81
Twenty-five	0	00.00	1	3.70
Total[b]	18[a]	100.01	27[a]	99.99

[a]Not all respondents indicated a level or number of years.

[b]Totals do not equal 100 percent due to rounding.

TABLE XXXVI

MEAN YEARS ON THE JOB WHEN THE MENTORING PROCESS WAS FIRST IDENTIFIED BY HOME ECONOMICS ADMINISTRATORS

Sex	N	Mean	Standard Deviation
Male	27	6.61	7.53
Females	18	7.67	4.68

TABLE XXXVII

FREQUENCY COUNTS REPRESENTING ALL RESPONDENTS IN THE ROLE OF APPRENTICE

Variable	Frequency	Percent
All Mentoring Relationships		
Current Mentoring Relationships		
Yes	70	27.13
No	188	72.87
Total	258	100.00
Past Mentoring Relationships		
Yes	167	64.73
No	91	35.27
Total	258	100.00
Number of Relationships Within Education		
None	4	2.74
One	38	26.03
Two	41	28.08
Three	35	23.97
Four	15	10.27
Five or more	13	8.90
Total[a]	146	99.99
Number of Relationships Outside Education		
None	91	55.15
One	40	24.24
Two	23	13.94
Three or more	11	6.67
Total	165	100.00
Level of Career Development at the Onset of First Relationship		
Undergraduate	70	40.46
Masters	40	23.12
Doctoral	27	15.61
On the Job/Professional	28	16.19
Other	8	4.62
Total	173	100.00
Age of Mentor		
20-29	4	2.45
30-39	36	22.09
40-49	68	41.72
50-59	42	25.77
60-69	12	7.36
70-79	1	0.61
Total	163	100.00
Age of Apprentice		
10-19	36	20.93
20-29	112	65.12
30-39	18	10.47
40-49	6	3.49
Total[a]	172	100.01
Most Important Mentoring Relationship Within Education		
Sex of Mentor		
Male	111	67.27
Female	54	32.73
Total	165	100.00
Age of Apprentice		
10-19	14	8.70
20-29	97	60.25
30-39	34	21.12
40-49	16	9.94
Total[a]	161	100.01

TABLE XXXVII (Continued)

Variable	Frequency	Percent
Age of Mentor		
20-29	2	1.29
30-39	35	22.58
40-49	58	37.42
50-59	50	32.26
60-69	9	5.81
70-79	1	0.65
Total[a]	155	100.01
Relationship		
Undergraduate Student	27	16.46
Colleague/Professional Peer/Friend	20	12.20
Faculty Member	16	9.76
Neighbor	1	0.61
Graduate Student	68	41.46
Department Head	8	4.88
Assistant	6	3.66
Highschool Student	3	1.83
Associate Dean	2	1.22
Employee/Extension Personnel	10	6.10
Member of Professional Group or Committee	2	1.22
Highschool Teacher	1	0.61
Total[a]	164	100.01
Academic Position		
Member of Faculty	85	51.52
Assistant/Associate Dean or Higher	27	16.36
Associate/Department Head	41	24.85
Other	12	7.27
Total	165	100.00
Level of Career Development		
Undergraduate	30	18.07
Masters	39	23.49
Doctoral	33	19.88
On the Job/Professional	60	36.15
Other	4	2.41
Total	166	100.00
Instigator of Relationship		
Mentor	57	34.97
Apprentice	41	25.15
Mutual	55	33.74
Cannot Identify	10	6.14
Total	163	100.00
Length of Relationship		
1-4 years	36	35.29
5-9 years	27	26.47
10-14 years	15	14.71
15-19 years	11	10.78
20-24 years	8	7.84
25-30 years	3	2.94
30-34 years	1	0.98
40-45 years	1	0.98
Total[a]	102	99.99
Cause of Termination		
Graduation of Apprentice	20	18.87
Maturation	13	12.26
Geographical Move of Apprentice	19	17.93
Retirement of Mentor	11	10.38
Death of Mentor	25	23.59
Apprentice Bypassed Mentor/Bad Feelings	4	3.77
Mutual Change of Employment	9	8.49
Departure of Mentor	5	4.71
Total	106	100.00

TABLE XXXVII (Continued)

Variable	Frequency	Percent
Levinson's Functions		
Teacher		
Yes	132	80.00
No	33	20.00
Total	165	100.00
Sponsor		
Yes	96	58.18
No	69	41.82
Total	165	100.00
Host and Guide		
Yes	77	46.67
No	88	53.33
Total	165	100.00
Exemplar		
Yes	135	81.82
No	30	18.18
Total	165	100.00
Counselor		
Yes	129	78.18
No	36	21.82
Total	165	100.00
Realization of the Dream		
Yes	57	34.55
No	108	65.46
Total	165	100.00

[a]Totals do not equal 100 percent due to rounding.

TABLE XXXVIII

MEANS REPRESENTING ALL RESPONDENTS IN THE ROLE OF APPRENTICE

Variable	N	Mean	Standard Deviation
All Mentoring Relationships			
Number of Relationships Within Education	146	2.68	2.69
Number of Relationships Outside Education	165	0.75	1.03
Age of Mentor	163	44.21	8.81
Age of Apprentice	172	23.70	5.99
Most Important Mentoring Relationship Within Education			
Age of Apprentice	161	27.40	7.30
Age of Mentor	155	45.30	8.52
Length of Relationship	102	9.07	7.68

all outside of the educational arena. An examination of the means indicated 2.39 relationships per respondent within education and less than one (.72) outside education (Table XXXVIII).

More than three-fourths of the responding administrators (79.19%) indicated that their first mentoring relationship began at some point during their educational training (40.46% undergraduate, 23.12% master's. 15.61% doctoral), as compared to only 16.19 percent on the job.

More than 60 percent of the respondents (65.12%) were in their twenties when their first mentoring relationship began, with the mean age slightly more than 23 years. Nearly 90 percent (89.57%) identified a mentor between the ages of 30 and 59 with a mean age of 44.20 years.

In response to the question of the sex of the mentor in the one most important relationship in the educational arena, over two-thirds (67.27%) of those responding indicated a male in the role of mentor.

When asked to specify both their age and that of their mentor at the onset of this relationship, nearly two-thirds of the respondents (60.25%) were in their twenties, with the mean age slightly more than 27 years. Respondents recalled mentors between 30 and 59 years of age, as 22.58 percent identified an individual 30 to 39 years, 37.42 percent 40 to 49 years, and 32.26 percent 50 to 59 years. The mean age of the mentor was found to be 45.30 years.

The relationship of apprentice to mentor during this important association was found most commonly to be that of graduate student (41.46%). The next most frequently identified position was that of undergraduate (16.46%) followed by friend, colleague, or professional peer (12.20%).

The mentor's professional position was most often found to be that of faculty member (51.52%), although associate department head or department head were cited in nearly one-fourth of the responses (24.85%).

In an attempt to determine who first instigated the relationship, no distinct differences were apparent as slightly more than one-third (34.97%) of the respondents indicated that the mentor was the initiator, more than one-fourth (25.15%) recognized themselves as instigator, and another one-third (33.74%) remembered a mutual attraction.

More than one-third (36.15%) of the respondents were on the job when their mentoring relationship began, while nearly one-fourth (23.49%) were working toward a master's degree, 19.88 percent were doctoral students, and 18.07 percent were at the undergraduate academic level.

For those respondents whose relationship had terminated, 35.29 percent were involved from one to four years and 26.47 percent from five to nine years. The mean length of terminated relationships was found to be 9.07 years, with death the principle cause for termination (23.59%). Other primary reasons for ending the relationship between mentor and apprentice were graduation of the apprentice (18.87%) and geographical move of apprentice (17.93%).

Evaluation of Levinson's six mentoring functions revealed recognition of four descriptors by over 50 percent of the respondents as a function attributable to their mentor; teacher (80%), sponsor (58.18%), exemplar (81.82%), and counselor (78.18%). The functions of host and guide and realization of the dream were recognized as evident in the mentor by less than 50 percent of the respondents (host and guide 46.67%, realization of the dream 34.55%).

Respondent in the Role of Mentor

Table XXXIX presents the frequency data for the individual items concerned with the respondent in the role of mentor. Applicable means appear in Table XL. Results of each individual item are described below.

When respondents were asked to consider their role as mentor, only slightly more than half (51.75%) were able to identify an individual who they could presently regard as an apprentice, although nearly two-thirds (61.33%) could identify a past apprentice relationship.

Of those respondents who either were now or had been in the past involved in such a relationship, no clear pattern emerged concerning the total number of relationships within education. Thirteen percent (13.68%) identified two relationships in the educational arena; 9.40 recognized three such relationships, 10.25 percent were involved in four relationships, 8.55 percent in five, and another 11.97 percent in ten apprentice relationships. Analysis of means provides for more clarity as the mean number of relationships within education was slightly more than nine.

Outside education, the vast majority could identify no such relationship (69.74%), although 9.87 percent and 8.55 percent recognized one or two relationships, respectively. Again, the means provides a more descriptive illustration as a mean of only 1.38 outside relationships could be identified.

The majority of all respondents initiated their first apprentice relationship early in their career; 45.51 percent indicated zero to five years, with percentages dropping steadily as the time frame lengthened. The data are supported when analyzing the mentor's age at

TABLE XXXIX

FREQUENCY COUNTS REPRESENTING ALL RESPONDENTS IN THE ROLE OF MENTOR

Variable	Frequency	Percent
All Mentoring Relationships		
Current Mentoring Relationships		
Yes	124	48.25
No	133	51.75
Total	257	100.00
Past Mentoring Relationships		
Yes	157	61.33
No	99	38.67
Total	256	100.00
Number of Relationships Within Education		
None	3	2.56
One	10	8.55
Two	16	13.68
Three	11	9.40
Four	12	10.26
Five	10	8.55
Six	7	5.98
Seven	3	2.56
Eight	8	6.84
Ten	14	11.97
Twelve	7	5.98
Fourteen	1	0.86
Fifteen	1	0.86
Twenty	2	1.71
Twenty-five	5	4.27
Thirty	3	2.56
Fifty	3	2.56
Ninety-nine	1	0.86
Total[a]	117	100.01
Number of Relationships Outside Education		
None	106	69.74
One	15	9.87
Two	13	8.55
Three	4	2.63
Four	2	1.32
Five	5	3.29
Eight	2	1.32
Nine	1	0.66
Ten	1	0.66
Twenty	2	1.32
Fifty	1	0.66
Total[a]	152	100.02
Years Into Career at the Onset of First Relationship		
0-5	76	45.51
6-10	48	28.74
11-15	35	20.96
16-20	6	3.59
More than 20	2	1.20
Total	167	100.00
Age of Mentor		
20-29	37	22.70
30-39	92	56.44
40-49	33	20.25
50-59	1	0.61
Total	163	100.00
Age of Apprentice		
10-19	12	7.69
20-29	118	75.64
30-39	25	16.03
40-49	1	0.64
Total	156	100.00

TABLE XXXIX (Continued)

Variable	Frequency	Percent
Most Important Apprentice Relationship Within Education		
Sex of Apprentice		
Male	88	58.67
Female	62	41.33
Total	150	100.00
Age of Mentor		
20-29	11	7.75
30-39	62	43.66
40-49	55	38.73
50-59	13	9.16
60-69	1	0.70
Total	142	100.00
Age of Apprentice		
10-19	10	7.30
20-29	86	62.77
30-39	33	24.09
40-49	7	5.11
50-59	1	0.73
Total	137	100.00
Relationship		
Professor/Graduate Committee Member	40	26.67
Associate/Dean	9	6.00
Supervisor/Administrator	14	9.33
Highschool Teacher	1	0.67
Graduate Adviser	43	28.67
Head of Research Project	9	6.00
Colleague/Professional Peer	7	4.67
Undergraduate Adviser	7	4.67
Department Head	20	13.33
Total[a]	150	100.01
Academic Position		
Graduate Student	72	48.00
Associate Dean	3	2.00
Instructor/Assistant/Associate/Professor	32	21.33
Undergraduate Student	19	12.67
Research Assistant	11	7.33
Colleague/Professional Peer	2	1.33
Administrative Assistant	3	2.00
Director of Federal Project/Extension Personnel	4	2.67
Highschool Student	1	0.67
Department Head	3	2.00
Total	150	100.00
Number of Years Into Career		
0-5	34	22.97
6-10	35	23.65
11-15	31	20.95
16-20	28	18.92
Over 20	20	13.51
Total	148	100.00
Instigator of Relationship		
Mentor	53	35.33
Apprentice	39	26.00
Mutual	51	34.00
Cannot Identify	7	4.67
Total	150	100.00
Length of Relationship		
1-4 years	26	47.27
5-9 years	21	38.18
10-14 years	7	12.73
15-19 years	0	0.00
20-24 years	1	1.82
Total	55	100.00

TABLE XXXIX (Continued)

Variable	Frequency	Percent
Cause of Termination		
Maturation	8	13.79
Departure of Mentor	11	18.97
Graduation and Departure of Apprentice	32	55.17
Apprentice Changed College Within University	2	3.45
Departure of Apprentice Not Necessarily Due to Graduation	4	6.90
Other	1	1.72
Total	58	100.00
Levinson's Functions		
Teacher		
Yes	125	83.89
No	24	16.11
Total	149	100.00
Sponsor		
Yes	99	66.44
No	50	33.56
Total	149	100.00
Host and Guide		
Yes	73	48.99
No	76	51.01
Total	149	100.00
Exemplar		
Yes	108	72.48
No	41	27.52
Total	149	100.00
Counselor		
Yes	122	81.88
No	27	18.12
Total	149	100.00
Realization of the Dream		
Yes	55	36.91
No	94	63.09
Total	149	100.00

[a]Totals do not equal 100 percent due to rounding.

TABLE XL

MEANS REPRESENTING ALL RESPONDENTS
IN THE ROLE OF MENTOR

Variable	N	Mean	Standard Deviation
All Mentoring Relationships			
Number of Relationships Within Education	117	9.03	12.71
Number of Relationships Outside Education	152	1.39	4.87
Age of Mentor	163	33.62	6.16
Age of Apprentice	156	24.53	4.65
Most Important Apprentice Relationship Within Education			
Age of Mentor	142	38.78	7.70
Age of Apprentice	137	26.71	6.35
Length of Relationship	55	5.36	3.61

the onset of the relationship. Over half of the respondents (56.44%) recognized their age as between 30 to 39 years, with the mean slightly over 33 years. The apprentice in these relationships was generally identified as between 20 to 29 years (75.64%) with a mean age of 24.53 years.

When respondents were asked to consider the one most important apprentice relationship within the educational arena, slightly more than half (58.67%) of the respondents were mentoring males and just under half (41.33%) females. Nearly half of the respondents (43.67%) were from 30 to 39 years at the onset of this relationship, and more than one-third (38.73%) were in their forties with a mean age of 38.78 years. Age of the apprentice was generally found to be from 20 to 29 (62.77%) although nearly one-fourth (24.09%) identified an apprentice who was from 30 to 39. The mean age was found to be slightly more than 26 years.

Investigation into the academic position held by the mentor elicited varied responses although 28.67 percent were in the role of graduate adviser, and 26.67 percent identified themselves in a professorial position. Nearly half (48%) of the apprentices were identified as graduate students with the next largest grouping instructor, associate, or assistant professor (21.33%).

As respondents considered the point in their careers when this relationship began, the percentages again were closely clustered throughout the responses; however, 23.65 percent recalled their first apprentice relationship as beginning six to ten years into their career. Just slightly fewer (22.97%) were in the early stages of their careers (zero to five years), followed by steady percentage decreases in relation to length of time in career.

In regard to instigation of the relationship, no clear pattern emerged as percentages were very close for all responses. More than one-third (35.33%) felt that they, the mentor, initiated the relationship, while more than one-fourth (26%) remembered the apprentice as the instigator. Thirty-four percent felt the association began through mutual efforts.

For those respondents whose apprentice relationship had terminated, the question regarding length of the association elicited varied responses. Nearly half of the respondents indicated a relationship lasting from one to four years, with another two-fifths indicating a five to nine year relationship. The mean relationship lasted slightly more than five years (5.36). When investigating a cause for termination of the relationship, the majority of the responding administrators (55.17%) agreed that termination was due to the graduation and subsequent departure of the apprentice.

Evaluation of Levinson's six mentoring functions indicated that the majority of the administrators identified four descriptors as characteristic of their role as mentor; teacher (83.89%), sponsor (66.44%), exemplar (72.48%), and counselor (81.88%). The functions of host and guide and realization of the dream were not found by the majority of the respondents to represent functions served by the mentor (host and guide 51%, realization of the dream 63.09%).

Perceived Importance of Mentoring in Administrative Advancement

In evaluating the overall importance of the mentoring relationship in the advancement of an individual in academic administration no

obvious pattern developed as percentages were rather closely distributed among the three alternatives (Table XLI). Almost two-thirds of the respondents, however, found mentoring to be important or very important in ultimate advancement within administration. The remaining 25.87 percent looked upon mentoring as not important for one's advancement in higher education administration.

Discussion of the Findings

Mentoring in academic administration has only recently been recognized as a valid method for advancement. Although the literature specifically related to this subject matter is scarce, it could be concluded from available studies that women in or aspiring to academic administration are experiencing considerably fewer mentoring relationships than their male counterparts. The status of this situation is of particular importance to the home economist who finds it necessary to cope in the male dominated administrative arena.

As such it was deemed vitally important to assess the status of mentoring relationships within home economics. In order to obtain a comparison, the male dominated engineering field was selected as part of the sample.

The first objective of the study was to determine whether responses of home economics administrators were different from those of engineering administrators in terms of the number of past and present mentoring relationships. In both cases home economists could identify significantly more relationships than engineers. These results tend to support those of Picker (1980) who found that female administrators had actually received more sponsorship than male administrators.

TABLE XLI

FREQUENCY COUNT REPRESENTING PERCEIVED IMPORTANCE OF MENTORING RELATIONSHIPS IN ACADEMIC ADMINISTRATIVE ADVANCEMENT BY ALL RESPONDENTS

Variable	Frequency	Percent
Very Important	87	33.59
Important	105	40.54
Not Important	67	25.87

When further analysis of home economics administrators was conducted in order to determine the presence of differences due to sex, few significant differences were found between male home economics administrators and female home economics administrators. Both groups recalled numerous past relationships, although current associations were limited. These differences could be attributed to the inability of the respondents to recognize their current relationships as actual mentor relationships or, as suggested by Roche (1979), with professional growth respondents no longer felt the need to develop such relationships.

The research was also designed to assess the respondents in their role as mentor. Again home economists could identify significantly more relationships, both current and past, than engineers. Within the home economics profession females tended more often to identify current or past apprentice relationships than males. This finding was contrary to existing literature which suggested that although aware of the relationship, the rate of involvement of females is negligible (Benton, 1980; Fowler, 1982; Picker, 1980). One explanation for these results may be due to the nature of the disciplines included in the study. Engineering may be regarded as a technically oriented profession, less involved in human relationships than with scientific analysis, while home economics is a human oriented profession concerned with people, their growth and development.

Benton (1980), Josefowitz (1980) and the author of "Women Finally Get Mentors" (1978) suggested that female mentors are beginning to emerge as they become aware of the benefits inherent in this relationship. The literature contained several suggestions that the need for a mentoring relationship diminished as apprentices began realizing their

career goals ("Mentors Seen As Key Allies," 1980; Roche, 1979). The results of the present study would tend to support these earlier studies as both groups reported many more previous mentor relationships than current relationships. This may suggest that once administrative status has been attained one tends to assume the role of a mentor rather than continuing in the role of apprentice.

Numerous earlier studies indicated that although men continued to receive the primary benefits of the mentor relationship, women executives in business and industry were receiving more mentorship than in other career areas (Bartol, 1978; Cook, 1980; Halcomb, 1980; "Mentors Seen As Key Allies," 1980; Roche, 1979). Contrary to these findings the results of the present study indicated no differences between the administrators in home economics and those in engineering regarding the number of relationships outside the educational arena. Analysis of the male and female administrators in home economics also supported these findings. Picker (1980) noted that within education female administrators actually received more sponsorship than their male counterparts, a finding supported by the results of this study as home economists entered into more relationships in education than did engineers. Differences were noted when assessing the male and female administrators in home economics however, as the females were found to extend significantly more mentor assistance than males, due perhaps to the increased awareness of this relationship. These results are supported by writings in the literature which suggest that women today are beginning to assume the role of mentor ("Women Finally Get Mentors," 1978; Benton, 1980; Josefowitz, 1980; "Women Executives: What Holds So Many Back?," 1982).

The second objective of the study was to examine selected characteristics of the mentoring relationship and determine if differences existed between the responses of administrators in home economics and those in engineering. Respondents were questioned in regard to their level of career development at the inception of both the first and the most important mentoring relationship in education. Both groups identified their first and their most important mentoring relationship early in their career development (undergraduate or master's level), a finding which strongly supports those of Inana (1981), who found that home economists began relationships at the undergraduate and master's level. Earlier studies by Bernard (1964), Bragg (1976), and East (1980) suggested that these relationships often develop in college or graduate school with professors.

The literature contains several studies which indicate that the mentor relationship is usually begun when apprentices are in their twenties and thirties (Inana, 1981; "Mentors Seen As Key Allies," 1980; Roche, 1979). In general this research supported the existing literature as home economics and engineering administrators identified their age as between 20 and 30 years for both their first and their most important mentor relationship in education. In their role as mentor all respondents were found to identify their first apprentice as in their twenties. When examining age of the apprentice in the most important apprentice relationship however, significant differences were found between the two groups of administrators as engineering administrators identified an apprentice between 20 and 30 years while home economics administrators were mentoring somewhat older individuals, 30 to 39 years. This difference may be due, in part, to the

interpretation of the relationship. It is possible that home economists may not regard the relationship as a serious commitment until later.

Earlier studies found that the average age of the mentor is approximately 40 years (Dalton, Thompson, and Price, 1979; Erickson, 1963; Inana, 1981; Levinson, 1978; "Mentors Seen As Key Allies," 1980; Roche, 1979), a time when individuals were established in their profession and were in the position to assume responsibility for the development of others. The present study generally supports the existing data as the mentor's age for all respondents in both the first and the most important mentoring relationship within education was between 40 and 45 years of age. A somewhat younger age, mid to late thirties, was found when examining respondents in their role as mentor for the first and the most important apprentice relationship within education.

Major differences were found when examining the sex of the mentor and apprentice. Engineering administrators, all of whom were males, identified male mentors and male apprentices. When analyzing responses of male and female administrators in home economics both sexes tended to identify mentors and apprentices of their own sex. Although these findings support those of Inana (1981) who also studied home economists, they refute findings involving women in other professions (Benton, 1980; Halcomb, 1980; "Mentors Seen As Key Allies," 1980; Roche, 1979; Vanzant, 1981) whereby women more often identified male mentors. One explanation for this phenomenon may be that the professionals comprising this study were representative of professions strongly dominated by one sex, and individuals of the opposite sex simply were not readily available to serve as either mentor or apprentice.

The status of the respondents at the onset of the most important mentoring relationship was most often found to be that of graduate student, while in their most important apprentice relationship these same respondents recognized their status as that of professor or graduate committee member. These findings again support those of research conducted by Inana (1981) and East (1980) which concluded that faculty, graduate faculty in particular, were potential sources for mentor/apprentice relationships.

The literature suggested that top women executives are reluctant to extend help to aspiring professionals and are often resentful of opportunities made available that they themselves were not afforded (Halcomb, 1980; "Women Finally Get Mentors," 1978). In this study however, women were often the recipient of administrative mentorships, although these relationships tended to begin at the graduate student level.

Existing literature is unclear concerning the responsibility for instigation of the mentor relationship, although this was often dependent upon the sex of both the apprentice and the mentor. Several writings suggest that the responsibility lies with the mentor (Arbetter, 1980; Herman, 1980; Hyatt, 1979; McLane, 1981; Schmidt and Wolfe, 1980) as this individual must be willing to give time and attention, as well as serve as a role model. Other writings imply that the apprentice must assume the responsibility of instigating the relationship (Cook, 1979; Halcomb, 1980; Hennig, 1970). Certainly the present study offered little by way of clarifying this issue as no differences were found between the two groups of administrators and all were relatively evenly divided among variables.

Respondents from both groups most often began their first and most important apprentice relationship in education during their first ten years of professional employment. Although little research has probed this question, there exists a body of literature which, contrary to these findings, suggested that most professionals view the first 15 years of their career as a learning and growing period, and therefore were involved in mentor rather than apprentice relationships ("Mentors Seen As Key Allies," 1980; Roche, 1979).

No differences were found between the administrators in home economics and those in engineering regarding the tenure of the mentor or apprentice relationship. The mean duration for all mentor relationships was found to be approximately nine years. These figures strongly supported earlier studies which found relationships to last two to three years at the least, eight to ten years at the most (Hennig and Jardim, 1977a; Inana, 1981; Levinson, 1978; "Mentors Seen As Key Allies," 1980; Roche, 1979). Closer scrutiny of this variable however, revealed sharp differences between the mean length of the mentor relationships for male and female administrators in home economics, with females maintaining longer relationships than males (five years, male; eleven years, female). These findings lend support to recent research which suggests that women promote a higher degree of stability in their relationships which result in longer associations than males (Cameron and Blackburn, 1981; Inana, 1981; McLane, 1981).

In an attempt to determine the cause for terminated relationships, both mentor and apprentice, no differences were found between the two responding groups. Mentor relationships were most often ended due to graduation, geographical move, or death; while graduation and departure

of the apprentice most often terminated the apprentice relationship. Several earlier studies reported identical results (Inana, 1981; "Mentors Seen As Key Allies," 1980; Roche, 1979).

When assessing the results of Levinson's (1978) six mentoring functions, respondents differed significantly regarding four descriptors of their mentor; sponsor, exemplar, host and guide, and realization of the dream. More home economists identified all six functions than engineers. Similar differences were found when looking at these functions in the role as mentor. When looking at this question based on sex only a slight difference was found when analyzing the sponsor variable in regard to the role of apprentice. In general, no major differences could be identified between sexes regarding Levinson's six functions. This would imply that the differences may be the result of some variable within the disciplines rather than due to the differences in sex.

The third objective of the study was to determine whether responses of home economics administrators were different from responses of engineering administrators with respect to the perceived importance of mentoring relationships in one's advancement within higher education administration. Nearly all studies throughout the literature stressed the vital importance of the mentoring relationship for advancement in all areas of management and administration (Bolton, 1980; Cook, 1979; Fowler, 1982; Hennig, 1980; Holt, 1981; Kanter, 1977; Klopf and Harrison, 1982; Levinson, 1978; "Mentors Seen As Key Allies," 1980; Roche, 1979). Men have traditionally benefited from the experience and have recognized the importance of this relationship for centuries (Bartol, 1978; Halcomb, 1980; Levinson, 1978). Women, however, have either been unaware of the

informal organization (Hennig and Jarim, 1977a, 1977b) or not involved in collegial relationships to the same extent as men (Epstein, 1970) and therefore have, until recently, failed to recognize the importance of this relationship. Recent studies have shown, however, that women even more than men are beginning to recognize a mentor as important to their careers (Collins, 1978; Epstein, 1976; Halcomb, 1980; Hennig and Jardim, 1977a; Kanter, 1977; "Women Finally Get Mentors," 1978; Shepphard, 1982; Thompson, 1976).

In the present research home economics respondents found the mentoring relationship significantly more important to the advancement of administrators in higher education than did the engineering respondents. No differences, however, were found between the male and female administrators in home economics, which would suggest that differences may be attributable to something within the disciplines rather than to differences in sex. Certainly as home economics is a relatively new profession that has been through tumultuous periods, these differences may result from the relatively recent upsurge of home economists struggling for professional recognition and competing for top administrative positions. Further, it is possible that engineering administrators failed to recognize the mentoring relationship and its value because it had become such an intrinsic aspect of their professional environment that they were unable to discern its very existence. Another explanation could be that as the engineering profession is technically oriented, engineering administrators may tend to reject the entire idea of mentoring and believe that advancement is accomplished based upon one's technological skills. A final explanation for these

results may be that the definition of mentoring provided in the study influenced the answers of respondents.

A final part of the study sought to gain information regarding the point in one's educational or career development when the mentoring relationship was first identified. Although existing literature suggests that mentoring relationships generally begin at the undergraduate or master's level in education (Bernard, 1964; Bragg, 1976; East, 1980; Inana, 1981) the present researcher found that of the respondents from both groups who recognized this relationship as a student, the majority were in graduate school.

Of the respondents to this study who first recognized the mentoring relationship on the job, the responses of both groups were dispersed between one to thirty years. The mean, however, was found to be seven years. Although earlier studies indicated that these relationships were formed during the first ten years of one's professional life ("Mentors Seen As Key Allies," 1980; Roche, 1979), no reference was made to the point when the relationship was first recognized. As indicated by Benton (1980), Fowler (1982), and Picker (1980), identification of the relationship does not necessarily coincide with inception.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

The purposes of the study were to determine the presence and characteristics of mentoring relationships among administrators of home economics units in higher education (a basically human-oriented profession dominated by female administrators), and to determine the perceived importance of the relationship in one's advancement within higher education administration. In order to further investigate the situation and determine if this relationship was typical, administrators in colleges of engineering, a technically-oriented profession dominated by male administrators, were selected to provide a source of comparison.

The three objectives were to determine whether responses of home economics administrators were different from responses of engineering administrators

1. in terms of the number of past and present mentoring relationships,

2. in regard to selected characteristics of the mentoring relationship,

3. with respect to the perceived importance of mentoring relationships in one's advancement within higher education administration.

A questionnaire was developed, pilot tested and sent to 508 administrators (deans, associate deans and department heads) in Colleges of

Home Economics (or its equivalent) and Engineering in land grant institutions with a 1981-82 total enrollment of more than 15,000. Two hundred fifty-nine completed questionnaires were returned including responses from 140 engineering administrators and 119 home economics administrators. Frequency counts, means and chi-square distributions provided information for the three objectives of the study. The design of the study allowed for an assessment of the respondent in the role of both apprentice and mentor.

Conclusions

Table XLII shows the objectives of the study, the hypotheses tested, and the results of these tests. Eight hypotheses were tested to accomplish objective one. The first four were used to assess the respondent in the role of apprentice: there are no significant differences between responses of administrators in home economics and administrators in engineering with regard to

1. the existence of a current mentoring relationship,
2. the existence of a past mentoring relationship,
3. the number of mentoring relationships in the educational arena,
4. the number of mentoring relationships outside the educational arena.

Significant differences were found between the two groups of administrators when testing hypotheses one, two and three with home economics administrators identifying more current and past mentoring relationships and participating in more within the educational arena than engineering administrators; therefore these hypotheses were rejected. Significance was not reached when testing hypothesis four; consequently it could not be rejected.

TABLE XLII

HYPOTHESES AND RESULTS RELATED TO EACH OBJECTIVE

Abbreviated Objectives	Content of Hypotheses	Results			
		Home Economics/Engineering		Male/Female	
		Mentor Role	Apprentice Role	Mentor Role	Apprentice Role
1. To determine whether responses of administrators were different in terms of the number of past and present relationships.	Existence of current relationahip	*	*	ns	ns
	Existence of past relationship	*	*	ns	ns
	Number in educational arena	ns	*	*	ns
	Number outside educational arena	ns	ns	ns	ns
2. To determine whether responses of administrators were different in regard to selected characteristics of the relationship	At onset of first relationship:				
	Point within career development	ns	ns	ns	ns
	Age of mentor	ns	ns	ns	ns
	Age of apprentice	ns	ns	ns	ns
	Most important relationship within educational arena:				
	Sex	*	*	*	*
	Age of apprentice	ns	ns	ns	ns
	Age of mentor	*	ns	ns	ns
	Association between mentor and apprentice	ns	ns	ns	ns
	Academic position	ns	*	ns	ns
	Instigator	ns	ns	ns	ns
	Point within career development when relationship began	ns	ns	ns	ns
	Tenure of relationship	ns	ns	ns	ns
	Cause for termination	ns	ns	ns	ns
	Mentoring functions:				
	Teacher	ns	ns	ns	ns
	Sponsor	*	*	ns	*
	Host and guide	*	*	ns	ns
	Exemplar	ns	*	ns	ns
	Counselor	ns	ns	ns	ns
	Realization of the dream	*	*	ns	ns
		Home Economics/Engineering		Male/Female	
3. To determine whether responses of administrators were different with respect to the perceived importance of mentoring relationships.	Perceived importance	*		ns	

* $p < .05$

ns not significant

The other four hypotheses were tested to assess the respondent in the role of mentor: there are no significant differences between the responses of administrators in home economics and administrators in engineering with regard to

5. the existence of a current apprentice relationship,

6. the existence of a past apprentice relationship,

7. the number of apprentice relationships in the educational arena,

8. the number of apprentice relationships outside the educational arena.

Hypotheses five and six were tested and the findings were significant, indicating that home economics administrators identified more apprentice relationships than engineering administrators. With these results, hypotheses five and six were rejected. Significance was not reached when testing hypotheses seven and eight, therefore these hypotheses could not be rejected.

It was concluded from these findings that the home economics administrators were more often involved in mentor and apprentice relationships than engineering administrators and that a significant number of these are in the educational arena.

Twenty-six hypotheses were tested to accomplish objective two. The first 13 were designed to assess the respondent in the role of apprentice: there are no significant differences between responses of administrators in home economics and administrators in engineering with respect to

1. apprentice's level of career development at the onset of the first mentoring relationship,

2. age of the mentor at the onset of the first mentoring relationship,

3. age of the apprentice at the onset of the first mentoring relationship,

4. sex of the mentor in the one most important mentoring relationship within the educational arena,

5. age of the apprentice in the one most important mentoring relationship within the educational arena,

6. age of the mentor in the one most important mentoring relationship within the educational arena,

7. association between the apprentice and the mentor in the one most important mentoring relationship within the educational arena,

8. mentor's academic position in the one most important mentoring relationship within the educational arena,

9. instigator of the one most important mentoring relationship within the educational arena,

10. apprentice's level of career development at the onset of the one most important mentoring relationship within the educational arena,

11. tenure of the one most important mentoring relationship within the educational arena,

12. cause for termination of the one most important mentoring relationship within the educational arena,

13. mentoring functions performed in the one most important mentoring relationship within the educational arena.

No significant differences were found between the two groups when testing hypotheses one, two, three, five, six, seven, nine, ten, eleven, and twelve, therefore these hypotheses could not be rejected. Significance was reached when testing hypothesis four with both groups tending to identify mentors of their own sex. Consequently hypothesis

four was rejected. Hypothesis eight was rejected as home economists identified administrative mentors while engineers were most often found to be mentored by faculty members.

Hypothesis 13 could not be rejected for the variables teacher and counselor, implying that both groups identified these functions as descriptors of their mentor. Significance was reached however, and hypothesis 13 was rejected for the variables sponsor, host and guide, exemplar, and realization of the dream. In each case the home economics respondent indicated these were functions attributable to their mentor, while engineering respondents did not. These results would indicate that home economics respondents identified more functions in their mentor relationships than did engineering administrators. It was concluded that, in general, similar mentoring characteristics were attributable to administrators in both engineering and home economics.

Hypotheses 14 through 26 were designed to assess the respondent in the role of mentor: there are no significant differences between responses of administrators in home economics and administrators in engineering with respect to

14. number of years into the mentor's career at the onset of the first apprentice relationship,

15. age of the mentor at the onset of the first apprentice relationship,

16. age of the apprentice at the onset of the first apprentice relationship,

17. sex of the apprentice in the one most important apprentice relationship within the educational arena,

18. age of the mentor at the onset of the one most important apprentice relationship within the educational arena,

19. age of the apprentice at the onset of the one most important apprentice relationship within the educational arena,

20. association between the mentor and the apprentice in the one most important apprentice relationship within the educational arena,

21. apprentice's academic position in the one most important apprentice relationship within the educational arena,

22. instigator of the one most important apprentice relationship within the educational arena,

23. number of years into the mentor's career at the onset of the one most important apprentice relationship within the educational arena,

24. tenure of the one most important apprentice relationship within the educational arena,

25. cause for termination of the one most important apprentice relationship within the educational arena,

26. mentoring functions performed in the one most important apprentice relationship within the educational arena.

No significant differences were found when testing hypotheses 14, 15, 16, 18, 20, 21, 22, 23, 24, and 25, therefore these hypotheses could not be rejected. Significance was found and hypothesis 17 was rejected as engineers tended to mentor males and home economists mentored females. Hypothesis 19 was also rejected as home economics administrators identified older apprentices than did engineering administrators.

Hypothesis 26 could not be rejected for the variables of teacher, exemplar, and counselor suggesting that both groups recognized these as functions performed in their role as mentor. The remaining three

variables, sponsor, host and guide, and realization of the dream, were found to be statistically significant and therefore hypothesis 26 was rejected for these variables. In each case the home economics administrators were likely to perceive these descriptors as functions performed in their role as mentor, while engineering administrators did not. These results would indicate that home economists identify with and perform more of Levinson's mentoring functions than do engineers. It was concluded from these findings that, in general, similar mentoring characteristics were attributable to administrators in both engineering and home economics.

In order to accomplish objective three the hypothesis tested was that there are no significant differences between responses of administrators in home economics and administrators in engineering with regard to the importance of the mentoring relationship in one's advancement within academic administration. The results revealed a significant difference between administrators in engineering and administrators in home economics with home economists regarding the relationship as much more important to advancement than engineers and the hypothesis was rejected. On the strength of this finding it could be concluded that home economics administrators perceive the mentoring relationship as more important to administrative advancement than engineering administrators.

A part of the purpose of the study included an investigation into the sex of both mentor and apprentice. As responding administrators in engineering were all male, the researcher looked to the administrators in home economics for comparisons in regard to sex. The hypotheses tested in order to achieve this comparison were the same as those used

to compare home economists and engineers. In assessing the results with regard to the respondent in the role of apprentice significant differences were found between the male and female home economics administrators on the variables sex of the mentor in the one most important mentor relationship within the educational arena and Levinson's sponsor descriptor. Same sex mentoring relationships were more likely to occur, and females were more likely to attribute the sponsor function to their mentor than males.

When analyzing the respondent in the role of mentor, significance was reached for variables concerned with the number of apprentice relationships within the educational arena and sex of the apprentice in the one most important apprentice relationship within the educational arena. In general, female administrators identified more apprentice relationships within education than did male administrators, and same sex apprentice relationships prevailed throughout the administrators in home economics. As significance was not reached for any other variables comparing responses of males and females it was concluded that, in general, few differences occurred between male and female administrators in home economics regarding their mentoring relationships and the stated hypothesis could not be rejected.

Implications

The findings have major implications for all administrators, but especially for those in home economics. Existing literature has repeatedly stressed the lack of available female mentors throughout all management and administration. This study however, disputed the literature and found that administrators in home economics (a profession

dominated by female administrators) were more likely to have identified a mentor and were more likely to be serving in the role of mentor than administrators in engineering (a profession dominated by male administrators). Certainly these findings suggest that not only are mentoring relationships available to these administrators in home economics, but that a significant pool of women exists who are willing to assume this role. As more women enter the administrative rank and file, they are no longer forced to identify with male peers as the only alternative. Capable women, aware of the importance of this intrinsic relationship, are sharing their knowledge and skill with upwardly mobile, aspiring professionals. As the number of potential female administrative mentors increases, the impact of these women will be felt throughout the upper echelons of academic administration.

It was further concluded that sex had no bearing on the existence of the mentor or the apprentice relationship and that the differences that did occur between the two groups may be attributed to something within the disciplines. As home economics has long been noted for its human orientation, it would appear that the integrative and supportive nature of this profession may be a determining factor for the development of these relationships. Throughout history the home economist has been sensitive and responsive to society and the individuals that make up that society. Therefore it would seem quite logical that the leaders of this profession would be predisposed to serve as role models for subordinates, providing necessary and beneficial mentoring functions. Home economics is unique in that as a predominately female profession, women have long held positions within administration and have therefore provided the role models not always available in male dominated

professions. Furthermore, the problems inherent with women mentoring other women are not as likely to occur due to the collegiality prevalent among home economics leaders. These so called gatekeepers are willing to admit newcomers and assist in the socialization process.

After reviewing the literature, it is difficult to deny the value of developing mentor relationships. As more women enter administrative circles it is evident that these relationships will serve as a major factor in their success or failure. Although such relationships are scarce for women in other disciplines, the present study has provided data contradicting this situation for individuals in home economics administration. Regarded as one academic field at the college level that has provided a stimulating place for academically and achievement oriented women, the results of this research underscore the fact that home economists are no longer content to "wait passively for a senior person to notice their achievement" (Hall and Sandler, 1983, p. 6), rather they are administrators with the insight and intelligence to not only seek necessary mentor relationships for themselves, but to recruit and sponsor capable women into administrative careers of their own.

Suggestions for Further Study

The following research suggestions are based upon the results of the study:

1. As these results are contrary to much of the existing literature, it would be valuable to conduct similar studies of female administrators within other disciplines to determine if home economics is unique in its awareness and acceptance of mentoring relationships.

2. It was found throughout the study that administrators continually entered into mentoring relationships with individuals of their own sex. It would be of value to study this particular variable in an attempt to determine why such relationships occur.

3. As it is probable that mentor/apprentice relationships early in professional careers influence later roles as mentor, it would be of value to determine the relationship between a person's role as apprentice and the later role as mentor.

4. With the variety of responses received regarding personal characteristics of the relationship and the effect of mentoring on administrative advancement in higher education, it could prove beneficial to condense and organize this information into an analytical study to determine commonalities within various mentoring and apprentice relationships.

5. In this study and in the literature reviewed same sex mentoring relationships prevailed. It would be important to investigate the potential perpetuation of sex discrimination in selected professions if each sex continues to mentor among themselves in an effort to avoid problems associated with mentoring individuals of the opposite sex.

6. The literature strongly suggests that opposite sex mentoring relationships pose potential problems. Therefore it would be important to identify if such problems do exist, what they are, and how they can be eliminated.

7. As this study was limited to disciplines dominated by one sex or the other, a further study could be conducted within a career area where there is a more balanced distribution of male and female administrators.

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APPENDICES

APPENDIX A

CORRESPONDENCE

Jinger Eberspacher
Rt. 3 Box 118
Stillwater, OK 74074

Dear Colleague:

As a doctoral student in Clothing, Textiles and Merchandising/ Home Economics at Oklahoma State University, I am conducting research on the subject of mentoring as it pertains to women. Although the importance of mentor relationships has gained greater recognition in recent years, many able and ambitious people remain unfamiliar with the process and with the importance it plays in career development and success of young professionals. As there is very little information regarding the extent to which female mentoring relationships exist in academic administration, I am interested in investigating the existence and relevance of mentor relationships in Home Economics.

In order to develop my sample, I will need a current listing of administrators in colleges of home economics. Please provide on the enclosed sheet a list of names and addresses for all associate deans and department heads or chairmen (referring to individuals who are members of the administrative team rather than merely short-term presiders over faculty who assume responsibility of handling departmental problems) within your particular college.

The study cannot be conducted effectively without the assistance of administrators such as you. Your cooperation is greatly appreciated. Thank you.

Sincerely,

Jinger Eberspacher

Jinger Eberspacher
Rt. 3 Box 118
Stillwater, OK 74074

Dear Colleague:

As a doctoral student at Oklahoma State University, I am conducting research on the subject of mentoring in academia. Although the importance of mentor relationships has gained greater recognition in recent years, many able and ambitious people remain unfamiliar with the process and with the importance it plays in career development and success of young professionals. As there is very little information regarding the extent to which mentoring relationships exist in academic administration, I am interested in investigating the existence and relevance of mentor relationships in Engineering.

In order to develop my sample, I will need a current listing of administrators in colleges of engineering. Please provide on the enclosed sheet a list of names and addresses for all associate deans and department heads or chairmen (referring to individuals who are members of the administrative team rather than merely short-term presiders over faculty who assume responsibility of handling departmental problems) within your particular college.

The study cannot be conducted effectively without the assistance of administrators such as you. Your cooperation is greatly appreciated. Thank you.

Sincerely,

Jinger Eberspacher

Please complete by filling in the appropriate names and addresses:

Dean

Name

Address

Associate Dean

Name

Address

Name

Address

Department Head or Chairman

Department

Name

Address

Department

Name

Address

Department

Name

Address

Department

Name

Address

Department

Name

Address

(Use back of sheet for additional department names)

Return completed form to: Jinger Eberspacher, Rt. 3, Box 118, Stillwater, OK 74074

O K L A H O M A S T A T E U N I V E R S I T Y

Department of Clothing, Textiles & Merchandising

September 1, 1983

Dear Colleague:

Mentoring relationships have come to be regarded as an important aspect of training and career development and have been described as one way for professionals to obtain support in an organization, yet many able and ambitious people remain unfamiliar with the process. We are conducting a study to determine the existence, relevance and characteristics of mentoring relationships among administrators in academia. Your response to these questions will provide valuable information for assessing the importance of this relationship in career development.

There are three major parts to the questionnaire. Part one pertains to you in the role of APPRENTICE while Part two pertains to you in the role of MENTOR. Part three requests general information regarding the mentoring relationship.

Upon completion of the questionnaire, please return in the self-addressed stamped envelope by September 15. The information you provide will be held in strict confidence and will be used only in an anonymous summary form as a basis for statistical analysis.

The study cannot be conducted effectively without the assistance of administrators such as you. Your cooperation is greatly appreciated. Thank you.

Sincerely yours,

Jinger Eberspacher
Graduate Teaching Associate

Lynn Sisler, Professor and
Head of Department

Encls.

O K L A H O M A S T A T E U N I V E R S I T Y

Department of Clothing, Textiles & Merchandising

September 20, 1983

Dear Colleague:

Approximately two weeks ago you should have received a questionnaire from me. We are attempting to determine the existence, relevance and characteristics of mentoring relationships among administrators in academia. Your response to these questions is vitally needed in order to assess the importance of this relationship in career development.

I have not yet received your completed questionnaire. Please take a few minutes to fill out the questionnaire and return as soon as possible. If you've already done so, thank you very much for your cooperation.

Sincerely,

Jinger Eberspacher
Graduate Research Associate

O K L A H O M A S T A T E U N I V E R S I T Y

Department of Clothing, Textiles & Merchandising

October 31, 1983

Dear Colleague:

Thank you very much for consenting to complete the enclosed questionnaire. Your willingness to assist in this study concerning the existence, relevance and characteristics of mentoring relationships among administrators in academia is greatly appreciated.

I have enclosed a self-addressed stamped envelope for your convenience. Be assured that your responses will be treated confidentially.

Again, thank you for your help.

Sincerely,

Jinger Eberspacher
Graduate Teaching Associate

Enclosure

O K L A H O M A S T A T E U N I V E R S I T Y

Department of Clothing, Textiles & Merchandising

November 18, 1983

Dear Colleague:

Several weeks ago you should have received a questionnaire. YOUR ASSISTANCE IS VITAL in determining the existence, relevance and characteristics of mentoring relationships among administrators in academia. As we have not yet received your questionnaire another is included for your convenience.

There are three major parts to the questionnaire. Part one pertains to you in the role of APPRENTICE while Part II pertains to you in the role of MENTOR. Part three requests general information regarding the mentoring relationship.

Please take a few minutes to complete and return immediately in the enclosed self-addressed stamped envelope. Your response will be treated anonymously and confidentially.

We are looking forward to receiving your response shortly. If you have already completed the questionnaire, thank you for your help.

Sincerely,

Jinger Eberspacher
Graduate Teaching Associate

Lynn Sisler, Professor and
Head of Department

Enclosures

APPENDIX B

INSTRUMENT

Code Number

EXISTENCE AND RELEVANCE OF MENTORING RELATIONSHIPS AMONG ADMINISTRATORS IN HOME ECONOMICS AND ENGINEERING

Please answer each item as accurately as possible. Thank you for your assistance in this study.

Jinger Eberspacher
Graduate Teaching Associate
Department of Clothing, Textiles
and Merchandising
College of Home Economics
Oklahoma State University

MENTORING RELATIONSHIPS AMONG ADMINISTRATORS

Consider the following definitions as you complete the questionnaire:

MENTOR - A wise and trusted teacher; one who helps to equip an apprentice for larger responsibilities through the assignment to progressively more difficult and responsible positions.

APPRENTICE - A beginner, a learner; one who is affiliated with a mentor.

YOU IN THE ROLE OF APPRENTICE

PART I

1. Do you currently have an individual(s) whom you would regard as your mentor? Yes ___ No ___

2. Can you identify an individual(s) who, although the relationship has terminated, served as your mentor in the past? Yes ___ No ___

   A. If answers to both questions 1 and 2 are no, skip to question 22.

3/4. Of the total number of mentoring relationships, how many were/are in the educational arena? _____ How many were/are outside the educational arena? _____

5. At what point in your career development were you when your first mentoring relationship began? Undergraduate ___; Graduate: Masters ___, Doctoral ___; On the job, professional; Other (Please specify) _____

6/7. When this relationship began, what age were you? _____ Your mentor? _____

8. In what way do you feel you served as an apprentice? _____

Answer the following questions in light of the ONE mentoring relationship within the EDUCATIONAL ARENA which has been the most important to you. If none can be identified, please skip to question 22.

9. What sex is this individual? Male ___ Female ___

10. What is/was your relationship to this individual at the time? _____

11. What academic position is/was this particular mentor at the time? _____

12. In your opinion, who instigated the relationship, you or your mentor? _____

13. How did the relationship develop? _____

14. Describe the relationship. _____

15. At what point in your career development were you when this relationship began? Undergraduate _____; Graduate: Masters _____, Doctoral _____; On the job, professional _____; Other (please specify) _____

16/17. When the relationship began, what age were you? _____ Your mentor? _____

18. If the relationship has terminated, how long did it last? _____

19. What caused the termination? _____

20. What characteristics did/does this individual possess which would qualify him/her to be identified as a mentor? _____

21. From the following mentoring functions identified by Levinson, in his book, Season's of A Man's Life, Circle the letter(s) representing the descriptors of your mentor.
    a. Teacher - enhances skills and intellectual development
    b. Sponsor - uses influence to facilitate entry and advancement
    c. Host and Guide - welcomes the initiate into the occupational and social world
    d. Exemplar - serves as model
    e. Counselor - provides advice and moral support
    f. Realization of the Dream - facilitates dreams through belief in the individual and support of the individual's dream.

YOU IN THE ROLE OF MENTOR

PART II

22. Do you currently have an individual(s) whom you regard as your apprentice? Yes ___ No ___

23. Can you identify an individual(s) who, although the relationship has terminated, were regarded as past apprentices? Yes ___ No ___

If answers to both questions 22 and 23 are no, skip to question 43.

24/25. Of the total number of apprentice relationships, how many were/are in the educational arena? _____ How many were/are outside the educational arena? _____

26. Approximately how many years into your career were you when you acquired your first apprentice? 0-5 years ___ 6-10 years ___ 11-15 years ___ 16-20 years ___ more than 20 years ___ Other (please specify) _____

27/28. When this relationship began, what age were you? _____ Your apprentice? _____

29. In what way do you feel you served or are serving as a mentor? _____

Answer the following questions in light of the ONE apprentice relationship with the EDUCATIONAL ARENA which has been the most important. If none can be identified, please skip to question 43.

30. What sex is this individual? Male ___ Female ___

31. What is/was your relationship to this individual at the time? _____

32. In what academic position is/was this particular apprentice at the time? _____

33. In your opinion, who instigated this relationship, you or your apprentice? _____

34. How did the relationship develop? _____

35. Describe the relationship. _____

36. Approximately how many years into your career were you when this relationship began? 0-5 years ___ 6-10 years ___ 11-15 years ___ 16-20 years ___ more than 20 years ___ Other (please specify) _____

37/38. When this relationship began, what age were you? _____ Your apprentice? _____

39. If the relationship has terminated, how long did it last? _____

40. What caused the termination? _____

41. What characteristics did/do you possess which qualify you to serve as a mentor? _____

42. From the following mentoring functions identified by Levinson, in his book, Season's of A Man's Life, circle the letter(s) representing your role as mentor to this particular apprentice?

a. Teacher - enhances skills and intellectual development
b. Sponsor - uses influences to facilitate entry and advancement
c. Host and Guide - welcomes the initiate into the occupational and social world
d. Exemplar - serves as a model
e. Counselor - provides advice and moral support
f. Realization of the Dream - facilitates dreams through belief in the individual and support of the individual's dream.

- CONTINUED ON BACK -

GENERAL INFORMATION REGARDING THE MENTORING RELATIONSHIP

PART III

43. In your opinion, how does a mentoring relationship affect one's advancement in higher education administration? _____

_____

44. What activities do you feel a mentor performs which are beneficial to an apprentice within the realm of academic administration? _____

_____

45. At what time in your educational or career development did you first identify the mentoring relationship for what it was:

a) As a student? _____ What level? _____
b) On the job? _____ How many years? _____

46. How important do you regard this relationship in the advancement of an individual in academic administration? Very Important _____ Important _____ Not Important _____

PART IV

Directions: Check (✓) the appropriate category.

Position:
- Dean _____
- Associate Dean _____
- Department Head or Equivalent _____
- Other (please specify) _____

Area:
- Engineering _____
- Home Economics _____
- Other (please specify) _____

Sex:
- Male _____
- Female _____

Thank you for responding to this questionnaire.

Please return the completed questionnaire
in the postage paid envelope provided.
Return to: Central Mailing Services (Eberspacher)
Oklahoma State University
Stillwater, OK 74078

APPENDIX C

REPRESENTATION OF LITERAL RESPONSES

Item 8 - In what way do you feel you served as an apprentice?

Home Economics

Gained skills to conduct academic research
Encouraged to assume responsibility of leadership
Involvement in professional activities
Learned to identify own potential
Listening, watching, observing, emulating
Acted as assistant or helper
Learning administrative techniques, procedures, leadership style
Developed opportunities for identifying philosophy, intellectual and teaching abilities
Learning to organize my time and resources
Encouraging idea exchange; helping develop concepts
Acted as a trusted, special friend

Engineering

Worked on his research project
Observation of professional example
I did the work; mentor suggested direction
Doing the things that would lead to a profession in engineering
My mentor gave me the benefits of his practical experience
Learning techniques for intuitive thinking, research, and professional practice
Learning proper reporting skills and management skills
Learned the art of engineering
Used standards of excellence established by mentor, learned to be a pro
I used him as a role model
Through my role as a beginner, a learner
Professionally developing his ideas

Item 13 - How did the relationship develop?

Home Economics

I wanted to learn, he was willing to teach
Correspondence and visits after graduation
A mutual sharing and teaching together; trying out ideas
Guidance through grad school and introduction to profession
Via professional development opportunities
Upon employment. Mentor needed someone willing to try new approaches
Through my initial contact by letter, and a mutuality of interest that was instant upon the first meeting
First as an appreciative student in her class, then she requested me as a T.A.
Slowly and professionally through a mutual feeling of respect and interest
She selected me and stimulated me to go on towards a master's
She sought me out, recommended me for an appointment, supervised me, and taught skills
Through advising relationship

Through encouragement and support by the mentor
Through appreciation of knowledge on my part, and through appreciation of an ability to grasp knowledge on his
She recruited me for doctoral study
She gave assignments which caused me to grow and develop administrative skills
Through committee responsibilities; offer to rotate appointment followed
Through professional association meetings
She was my supervisor
Mutual respect
Developed through personal relationship
Through classes, respect and offering of expanded opportunities for learning, growth and new experiences
I was hired to apprentice for administration in home economics
Through mutual research interests
Through informal conferences
Grew out of classroom experiences
From a working relationship that broadened to include social
Through repeated contact with mentor
Took courses from, counseled with; I sought, she was open, available and willing to invest her time in me

Engineering

Mentor took a special interest in academic and family matters
Through frequent contact
Through social interaction
Worked together on research
Similar area of interest
Through close association in common interests, both professionally and culturally
I was "tapped" to work with this professor after my first semester of graduate study
He followed my career, giving me personal recommendations of potential jobs, techniques of teaching
Through joint teaching of a course
Mentor specifically selected the individual who was to become the heir apparent for his position when he retired. I was that individual
We were in the same field of interest, but he was older and more experienced. I think that in a certain way I saw him as a father
Mutual responsibilities
Mentor asked me to work for him
Initially as friends
Awareness of high standards for coursework
He was the head of my department
Mutually advantageous arrangement, plus individual was a great man who cared for others
I was given responsibility for developing research/teaching skills in an atmosphere conducive to two-way thinking
While at another university I sought out this individual who I considered to be the leader in his area
Through my respect of this particular individual

Developed as an employee
Outside classroom discussions
By entering grad school chosen specifically because of this individual's reputation
Gradual evolvement

Item 14 - Describe the relationship.

Home Economics

He was always interested in my activities and made me feel I was capable, bright and would go places
Mutual caring, but still clearly a mentor/apprentice role
A strong supportive mutual relationship
Colleagial
She gave guidance in my professional development, provided me with extra learning experiences, and increased the amount of respect I could assume
Friendly, professional, personal friend, supportive of each other, sharing
Introduction to people and professional contacts, information about positions, letters of reference that went far beyond expectations
Respectful, loving
Advice and professional counseling
Each served as sounding board and supporter of the other
Encouraged academically to pursue higher goals
Guiding, not directing; instructional
She was not especially warm, but she opened doors for me, encouraged creativity, and gave me responsibility
Mutual respect. He encouraged me to become a leader and provided opportunities to do so
Warm, trusting, open. I perceived her faults and limitations, but felt secure in having her high regard and respected her judgment
Quite formal; I respect her a great deal, but there is only minimal personal relationship
I admired him and have carried on some of his research
Confident, warm, respectful, friendly
Father/son
The relationship was close, demanding, filled with learning opportunities. Mentor actively sought opportunities to help me learn skills and acquire perspectives needed for administration
Prof/grad student
Very exciting, helpful and mutually rewarding
Excellent, continuous dialogue regarding research ideas
Encouragement; teaching how to lead in an organization; professional competence and behavior; appreciation of other cultures - she opened a whole new world for me
Helpful, instructional, supportive, mutual
Counseling and teaching - and an introduction to the professional academic environment
Provided exchange of ideas, views, experiences

Engineering

Challenging
Mentor continually sought to assign responsibilities for increased experience, saw to it that I was introduced to the right people and provided incentives for professional development
Casual discussion around school
Very close; father/son
It was a close personal and professional relationship - one of mutual respect and trust
I go to him for recommendations, discussions and ideas - He watches out for things that I might be interested in, including permanent change
Student/professor
Encouragement by mentor on a daily basis. I was also given major responsibility
He monitored my career, offering advice, counsel
Mutual support in work, respect
Rather formal, but with humor and candor
Role model as a teacher, researcher, department head and friend
Professional guidance, career input
Strictly professional
Guidance - professional development
Project director/assistant
Aloof but friendly
At the beginning I was a learner - later I was an involved associate
Mentor was first regarded with awe, then respect, and finally with genuine affection
Warm, personal relationship - much attention

Item 20 - What characteristics did/does this individual possess which would qualify him/her to be identified as a mentor?

Home Economics

Open scholarly, pragmatic, emphathetic, teacher, counselor, supporter
Supportive, nonthreatened
Provides a model behavior, knows people, has network
Intelligent, progressive, open, honest
Friendly, flexible, cooperative, gives positive criticism
Excellent teacher, warm and open human being
Caring and interested in people with potential
Unqualified time, a good listener, counselor
Experience, openness, willingness to share
Generous, supportive
Interest in me, empathy, willingness to be open and sharing a mutual need for support, intellectual ability which I admire, fame and experience
High level of professional commitment and involvement, interested in being a mentor
Warm, very supportive
Competent and respected as professional in her field of specialization, experienced; tactful, discrete, dependable, considerate
Professional, knowledgeable, diverse interests, challenging, high integrity, high energy level

Forward looking, nudger, questioning
A leader, articulate, well thought of
Successful, been through the ropes, knows people to whom he can introduce me to, patience, willingness to share knowledge and experience
Solid friend, answered questions and gave help openly
Perceptive tact, empathy, leadership, intelligence, sincerity, integrity, a true professional
Creative, a great scholar
Respect for others, professionalism, theorist
Competencies which I would desire for myself in a professional role
Personal interest in development; capacity to know next steps and provide relevant opportunities/suggestions; respect
Interest in another's growth and development. Willingness to share responsibility; positive
Approachable, willing to give time for discussion. Facilitates new experiences
Interest in students and concern for them was her outstanding trait. Also an excellent thinker, very knowledgeable in her field
Very secure person, humanistic, caring, bright, capable, witty
Charisma, creativity, knowledge
Principled in thought and behavior; disciplined in personal and professional life; a critical thinker but good listener; open, seeking ideas, humble, independent and encouraging independence
Sincere interest, exemplary model, generous, unselfish
Warm, nurturing, caring, clear thinking, wise counselor
Integrity, humor, intellectually curious, trustworthy
Professional attitude, sound thinker, good listener, excellent teacher
Nationally respected, objective, understanding, open to suggestions, easily accessible, dependable, ethical
Interest in my development and the quality of the profession
Knowledgeable, kind, even-tempered, a willingness to help, a giver of time, knowledge, guidance
Concern for other, deep commitment to continuing leadership in the profession
Wisdom, kindness, knowledge, caring
Futuristic, shares responsibility
Intellectual, supporter, strong, willing to help, resourceful, capable

Engineering

Sensitive, honest, straight forward with advice
Professional integrity, wisdom, knowledge, experience in a professional study area
Intelligence, kindness; thoughtful
Professional competence - knowledge in field
Patience, concern for individual
Honesty, professional and academic experience
Excellent technical ability - understanding attitude
Considerate, thoughtful, honest, intellectual
Breadth of values and a desire to impart them
Articulate, interested, incisive, professionally very competent
Outstanding professional, caring person
Personal magnetism, disciplined, organized, good communicator, enthusiastic

Recognized leader and was interested in me
Excellent research work record
Excellent teacher, good administrator, keen interest in people, fair, honest, good sense of humor
An intuitive reasoning ability which he projected to his research students without being overbearing
A remarkable caring scholar
Maturity, technical competence, empathy
Professionally very strong
Superior knowledge and insight
Concern; would motivate and encourage me. He challenged me
Wise, encouraging, easily gives responsibilities
Strong leadership abilities, wide academic and intellectual interests
Willingness to take a back seat in order to afford subordinate opportunity for experiences
He could always challenge me to reach farther

Item 29 - In what way do you feel you served or are serving as a mentor?

Home Economics

Teacher, sponsor, host and guide, exemplar, counselor, realization of the dream
Professional guidance
Educational and personal contacts
Accessibility, open discussion of issues and concerns, guidance, opening professional doors, encouraging
Offered guidance, knowledge, skills, support, time
Provided opportunities for professional growth
By grooming the person in research
Counseled them, complimented them, corrected them, liked them
Model, support-giver, helped to build self confidence, treated with value and respect
Opened doors, recommended and supported through entry activities, taught skills
Encouragement to be involved in broad scope of university functions, guidance, example, personal interest
Teaching some of the tricks of the trade
Providing inspiration and motivation, believing in potential of the apprentice
Provided support, guidance, a working partner
Used individual as sounding board, gave individual special assignments
Support, advice, leadership, sharing, experience, help form questions
Advice, counsel, direction
Teacher, supported ego development
Role model, goal setter, challenger
Development of teaching skills and career goals, relating with students, faculty and industry personnel
Moderate guidance, delegating increasing administrative responsibility and authority
Advisory capacity, listener
Providing opportunities

Engineering

Challenged him to reach out more
Encouraged and helped to develop professional attitudes, technical skills and direction
Faculty/grad student
Guide, adviser, friend
Sponsor, host and guide, exemplar, counselor, realization of dream, teacher
Provided leadership, guidance; monitored work and offered suggestions for change
Guided him in goal selection (career), helped get position of choice, watched him grow and mature
I listened, I tried to introduce ideas and people to him
Personal support, advice on how life seems to proceed
Provided opportunities, guidance, served as sponsor, inspiring confidence in abilities and dreams
Model and adviser in both personal and professional life
Adviser, employer
Provided challenges, broadened vision, encouragement
Personal and professional guidance
By providing expansion of the individual's responsibilities and providing the educational guidance for the job
Guidance, understanding
Advice, co-author on research papers
Encouraged him in teaching, assisted research
Teaching skills of good research and successful grant and contract acquisition
Career development guidance
Training in marketing methods of continuing education and handling administrative tasks
Offering a listening ear, source of ideas and guidance
Role model and support in developing job skills
Aid in funding, setting examples

Item 34 - How did the relationship develop?

Home Economics

Slow, in small pieces, answering questions, giving opinions
Frequent interaction; mutual interests; through friendship
Explicit job guidance, sharing of ideas on a candid level, inclusion in important meetings, sharing notes
I approached student to assist on a project
Just happened. He was always interested in what I was doing
I spotted unusual talents and qualities in the person and wanted to add to our mix of faculty
Concern for death of administration in home economics
Student need
Through shared interest through contacts and rapport in the graduate program
Through working together as staff/employer
Through interaction in class and extra curricular activities
Through supervision of work experiences

I tried to enhance her intellectual development
I provided encouragement, opportunities for growth, a working colleague
Mutual support
Progressive, through adviser role
Through desire to pursue similar career
Frequent planned contacts for both business and social interactions
Chose apprentice and appointed to the position following interview and assessment of potential (Dean to associate dean)
Interaction/discussion with apprentice when he was applying for position
Through appreciation of my knowledge on the part of the apprentice and through an appreciation of a grasp of knowledge on his
Through observing potential

Engineering

Took a special interest in academic/family matters
Through research and public service activities
A need to develop coordinated leadership in an academic program
By observing his potential
He was my Ph.D. student
Worked on research contracts
Admiration of students' gifts and a concern that he do well
By frequent conversations
Supervisor/employee
In the natural course of my position as department head
I saw in him qualities to become a first class researcher and work into an excellent research planner and administrator
Through a need for guidance on independent research
Through natural working relationship
Common teaching and research area
Classroom and office discussions
My office was always open to student concerns
Classroom excellence
I recognized the leadership potential and his academic ambition and sought him out to work for me
Realization of depth of understanding of research topics
I was his self appointed dutch uncle when he joined the faculty
I saw characteristics that caused me to suggest a career goal
He looked to me for advice; he also did a lot of work I did not have time to do
Gradual closeness through work and student's personal characteristics

Item 35 - Describe the relationship.

Home Economics

We have remained friends for over 35 years and periodically I've been asked for advice about such things as graduate study, job changes, etc.
I chose to bring her into our faculty when finished with Ph.D.; member of her peer evaluating committee
Intellectually and professionally stimulating; respect for each others opinions and abilities
Adviser/advisee; teacher/student; peer/peer

She is very independent as a scholar, which I encourage. We talk over administrative issues and problems
Dean/associate dean. I provided moderate guidance, delegating increasing administrative responsibilities and authority
Collegial
Help, advice and sponsor
The graduate student found my research interesting and had good discussions which led to my serving as his major professor
I have watched her blossom into a competent, self confident professional
Very close and open
Co-worker; not social
Excellent interchange of ideas and concepts
Rewarding, comfortable, mutually beneficial
Warm, respectful, tactful, positive and very useful
Professor/Ph.D. student
Sounding board for ideas, friend, teacher, research directot
I provided encouragement, opportunities for growth, a working colleague
Tended to work as a team, continue to stay in touch after her undergraduate degree was completed
Casual friends
I serve as model for teaching, leadership skills
Professional, caring, guiding
Supportive, open
I served as a model, moulder, builder, discoverer of potential
Close. She still seeks my advice. We talk several times a week and meet for lunch 2-3 times a month
Friendship, casual, businesslike, mutual support
Began as supervisor/employee but became egalitarian
Friendly, mutually beneficial
Developed from a business relationship to one of mutual trust and respect - to a lasting friendship
Respectful, caring
Teacher, sponsor, counselor
Easy, frequent conferences of informal nature occur even to this day

Engineering

Employer/student worker
Friendly
It was a close personal and professional relationship - one of mutual respect and trust
Advised him on course program - helped him establish his own area of expertise
Introduced him to new patterns of thought and a new collection of problems
Began as adviser in graduate school, then to research collaboration and now as colleagues at another institution
He came to me for advice. I try to keep him informed of things that effect him in any way (within the department)
Big brother, friend
Worked closely together, accomplished many things; he moved to a job that I felt he was well prepared for and did very well
Advice on professional style
Graduate student/professor

In addition to a close working relationship, I became very close to him in his personal life and have maintained this throughout our career
Faculty student relationship
Guidance in professional development
Student sought counsel, genuine friendship seemed to be mutually shared
He was bright, enthusiastic, and searching. I responded by developing these personal traits including changing career goals
I served as a consultant and provided focus for his research efforts
Give and take
Very good - warm and friendly
Easy discussion, mutual respect, mutual concern for ethical performance of high quality research, mutual love of field and service to mankind
I was receptive to his needs for intellectual development and his overtures to friendship
Professional
Discussed experiments, results, papers, proposals and presentations
Helped select career objectives, review progress in career path and suggest alternatives; develop self confidence in him
Cooperative mutual respect
I helped him make contacts, reviewed his work, counselled him on a variety of issues both technical and social

Item 41 - What characteristics did/do you possess which qualify you to serve as a mentor?

Home Economics

High on helping with experience base
Gregarious, knowledgeable person willing to devote time to aid student
Able to provide entry into professional world, capable of guiding academic development, social skills
Extensive professional experience
Interest in student; development listener, ability to open doors
Secure, non threatening, not threatened by bright, young capable people. I want capable young women to advance and be noticed. I'm also a caring person
Interest, concern, support for women - encouraging them to seek leadership positions and provide opportunities for growth
Interest in people and a desire to see them progress
Good listener, possess skills in human relationships, caring
I have a strong commitment to my profession and had good relations with my students and now with my colleagues
Sensitivity to others, ability to see and encourage potential, love to work with people and watch them grow
Enthusiastic about my job, about my students' abilities and potential development
Perceptive, sensitive, experienced, good listener, non-judgmental, creative, professional, committed
Advice, experienced in special area
Vision, empathy, assertiveness, leadership skills
High standards, professional attitude, concern for others
Concern for individual's growth and development
Skills, personality

Willingness to share, give credit to others, desire to see young colleague achieve potential
Supportive, liking and helping others grow, and ability to facilitate
Maturity, teacher, practitioner in profession for long period, skills not possessed as yet by apprentice, willingness, concern for colleague, common goals and shared focus, mutual respect
Friendly, challenging, supportive, questioning
Interest in people, goal orientation, door opener
Knowledge in subject matter area, several networks that are active, probably a good role model, I try.
Father image; she wished to emulate my character
Professional competence; interest in mentoring; ability to facilitate professional and personal development in others
Teacher, sponsor, host and guide, exemplar, counselor, realization of dream
Organizational skills
Experience as administrator, general interest in improving the status of women and increasing the pool of potential administrators
Caring and interest in high potential
Infinite patience, good ego development, expertise in a given area of knowledge and practice
Experience, reputation as scholar/researcher
Professional expertise on state and national level
Patience, desire to see young people develop, interest in observing intellectual development in young people

Engineering

Experience and professional accomplishments
Experience, broad perspective, optimist, non-threatening, honest
Desire to achieve excellence
Knowledge of field, general experience, certain leadership qualities
Open attitude, honesty, candor
Patience, interest in development of apprentice
Both position and experience in doing the job
Contacts in research area
Knowledge of the field, of societal context, and a willingness to use these to help a young person develop
Wisdom, experience, concern for the apprentice
Patience, interest, experience
Specialized knowledge and insight into problems related to the student's professional development and research
Teacher, sponsor, host and guide, exemplar, counselor, realization of dream
National reputation in my field
Professional skills, concern for the individual
Confidence in my own ability, wisdom, experience, ability to recognize talent in others
Interest in students, their development and goals
Willingness to work with students and patience
Age, some knowledge of campus style, good interpersonal style in most relationships
Interest in students
Technical skills

Understanding of insecurity of young person in profession, willingness to share experiences, ability to judge talent
An imaginative and open mind
Ability to easily communicate with the student, provide examples to guide logical reasoning, easy to talk to and a good listener
Developed strong basic science research program, have served in many areas professionally, try to leave the relationship with their being stronger technically than I am

Item 43 - In your opinion how does a mentoring relationship affect one's advancement in higher education administration?

Home Economics

By allowing participation as practice for working toward higher administration
Eases the advancement
May lead to contacts that are important
It can be most helpful, especially if the mentor is well known and respected
By opening doors either not considered, unrecognized or considered too lofty
Key part of successful development/needed at graduate level
Skill development, modeling behavior, organizational savvy
It enhances the development of a competent professional and minimizes feelings of frustration
In some cases a strong mentor can push a protege and also offer advice
As defined, I don't think it does
Makes it happen at all or more easily
Perhaps makes you aware of some opportunities and makes you known to those in control of those opportunities
Can be helpful if leads to network of associates
Determining value base
Not sure it does directly. A mentor sometimes sees in a person strengths they don't realize they have and they can thus encourage and support the person in attempts they would not have made on their own. I have also encouraged people not to go into administration if I thought they 1) wouldn't like it, 2) would perform poorly, or 3) have skills that would make more of an impact in another arena (research/teaching)
By providing experience, increased responsibilities and understanding
Very little
Facilitates entrance and achievement of goals. However, individual must prove own ability
Probably some characteristics of a good mentor are desirable ones for a good administrator
Not sure - I don't have one now - wish I did
I believe it is helpful, particularly for recommendations for future positions and acceptance by fellow scientists
It's important! Enriches the learning experience; a definite contribution
By opening doors to advancement and career guidance
Short cuts faculty judgments because the mentor has already experienced these errors in some cases

Stimulates professional goals which include advancement
Makes one very conceptual
Gives increased perception of the concerns of learners
Provides entry into higher administrative circles
Provides opportunity
You have a sounding board and peer critique without pressure
Provides close insight into nature of role
Provides support and encouragement
Provides a route (or the means to find a route)
Gives confidence to move ahead
It is of utmost importance, it will facilitate both reaching as well as the kind of performance on the job
Serves to encourage advancement
Provides the example
Reduces mistakes, helps set standard for achievement
Can be a control factor
Very helpful and needed
Can be positive factor in advancement
It opens doors, provides a reality base, shortens the learning time by preventing mistakes
Focuses goals, establishing confidence
May or may not be helpful. The search committee process currently used can negate to a certain extent the advantages of mentoring
For women it is absolutely necessary
One learns by teaching
It can be significant
A great facilitator
It's essential
Primarily as model for skills and style
May assist in opening some doors and making contacts
Makes possible contacts with influential people
It has been very important to me

Engineering

Extremely important, almost impossible to advance without some form of sponsorship or mentoring
Not an element at all
Training and experience under supervision
May give the desire to enter administration, depending on the mentor
Good counsel is always needed and very helpful, very important
He/she can recommend apprentice for appropriate position
Can speed up advancement
Can be helpful in the beginning but if continued very long it can be detrimental; a person should not work in the shadow of another.
It depends on the mentor. Can be influential if the mentor continues to help.
Provides contacts and experience for apprentice
Mentor recommends apprentice when promotion is possible
With the ideal mentor advancement through educational guidance should be faster
Not necessary; may inhibit new developments
Basically a hindrance. A person should develop own administrative style and cultivate appropriate relationships

Can either enhance or hinder, depends on personalities involved
Improves it
Good advice on how system works
Very beneficial for the growth and development of the apprentice
Provides an avenue for discussions and ideas
Encouragement and good will of mentor can affect the opinions of others in position of influence
Example, advice, networking
Sensitizes one
Job satisfaction, personal enrichment
Since academic management is not taught in class, it is the only effective way to get good administrators
Provides leadership training by doing
In many ways prepares for relationship with people
Learn the ropes, easing transitions, particularly tenure
Develops skills in effective management
Depends on the situation and the individual
There is a real buddy system. If the mentor belongs the apprentice benefits

Item 44 - What activities do you feel a mentor performs which are beneficial to an apprentice within the realm of academic administration?

Home Economics

Sharing insight and answering why questions
Counsel, opens doors, sees person appointed to committees, sends to meetings, sees that person gets exposure, provides feedback on performance
Introduction to profession and other professionals; references; career opportunities; career preparation
Provides credibility with professional contacts
Role model
Real world situations, discussions of situations/alternatives/ consequences, broadening perspectives of administrator and the professional
Legitimization in critical arenas, open and frank conversation
Helping them not only understand the system, but help them use it to get what they want
Encourage apprentice to broaden interest and experience beyond immediate scope of responsibilities
Introduction into subtle aspects of academe and to opportunities
Entry and participation in professional world
Provide opportunities to participate in complex activities, both at the planning level as well as in the actual implementation of such activities
Networking, management, advising
Professional model; listens, evaluates, challenges, supports, teaches, but does not command, order, destroy or irrevocably alter individual
Profit from experiences; introduction to others in responsible position, support for positions available
Introduction to influential people

Encourages, supports, listens with interest, helps open doors for the person's advancement, models
Lets the apprentice know of opportunities, provides knowledge
Adviser, counselor, listener, helper in decision making process
Builder of self confidence, updates content
Give clues as to how system operates, keeps one out of trouble
Providing recommendations, suggesting individual for other positions and participation in scientific symposia
Guide in politics of academic, learning that occurs by both partners
Learning to think like an administrator
Exposure to techniques of administration
Increasing range of experience and responsibilities, support
Nominator for openings, support letters - all critical
Shares experiences, frames questions and helps clarify issues, goals, values
Honest feedback (particularly positive), provides experiences and encourages risk-taking behavior
Helps to avoid pitfalls, build self confidence
Observer/provide feedback/available for help
Allows apprentice to fail creatively and eventually shows how to succeed
Recommends individual to committees and professional assignments, performs introductions, gives advice
Sharing of current process in professional activities and helping to develop one's philosophy about the profession and professional advice
Introduction into professional circles, guidance in making professional decisions, role model
Providing visibility of apprentice at higher levels

Engineering

Shows him the ropes
Direction and counseling
Provides the opportunity for visibility among others, assists in providing the chance for experience that allows individual to establish on reputation
He/she can speak of your qualities to others within administration
Sets an example; guidance
Advice, support
Explains the power structure and the internal politics
None
Introduces apprentice to the culture, provides an entree, gives apprentice experience and confidence, helps apprentice move into a position of responsibility
Advice and recommendations for positions
Positive feedback; negative feedbacks; objective criticism
Giving a chance for wider experience and responsibility
Impart an understanding of the methods and philosophies involved in educational administration
Transmitting experience
Accelerating learning
Provides benefits of experience, introductions, identifies opportunities
Mentor recommends apprentice when promotion is possible

Provide advice and encourage apprentice to seek his/her own goals
Moral support; promote involvement in committee work, provide information on research and professional activities
Provide good advice on how the system works
Role model, provide advice and counsel on professional activities
Shows how to set goals and prioritize; how to gain consensus on an issue; the need for planning; and how to organize activities and programs
Promotes individual by calling positive attention to him/her
Subtle guide for apprentice in productive directions, counsel against unproductive direction, recommend apprentice for positions that will optimize growth
Establish good working relations with superiors, develops confidence
Helps to socialize into acceptable behavior
Provide source of technical/professional knowledge; helps apprentice learn and accommodate to the academic environment
Identifies individuals for attention
Provide advice, recommendations for advancement
Provide insight into problems, help develop contacts
Advice on procedure which can be used in getting things done
Encouragement, advice, kick in the pants at times
Provide exposure to a variety of experiences and problems, and encouragement when things get tough
Demonstrate honesty and integrity
Example, advice, networking
Access to facilities, administrative support, financial support
Expands perception of world and develops methods for dealing with problems that may arise
Sets moral attitudes, social and professional responsibilities, integrity, promotes philosophical goals and technical goals

VITA

JINGER LOIS EBERSPACHER

Candidate for the Degree of

Doctor of Philosophy

Thesis: EXISTENCE AND RELEVANCE OF MENTORING RELATIONSHIPS AMONG ADMINISTRATORS OF HOME ECONOMICS AND ENGINEERING

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