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GENDER DIFFERENCES IN PREPARTION, PROMOTION, AND BARRIERS TO CAREER ADVANCEMENT: A STUDY OF MICHIGAN COMMUNITY COLLGE ADMINISTRATORS

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By

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ABSTRACT

GENDER DIFFERENCES IN PREPARTION, PROMOTION, AND BARRIERS TO CAREER ADVANCEMENT: A STUDY OF MICHIGAN COMMUNITY COLLGE ADMINISTRATORS

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The ongoing retirements of the two generations of administrators who founded community colleges have caused concern over where qualified leaders will come from in the years ahead. While developing a new generation of leaders appears to be a high priority for community colleges, this sector has been slow to bring women into top leadership positions in proportion to their representation as faculty and students. Therefore this study examined the career advancement and leadership development of community college administrators with particular attention to gender.

The theoretical perspectives guiding this study were human capital theory and a structural perspective. Researchers have suggested that career-related activities and human capital investments such as obtaining educational credentials, participating in professional development, and cultivating mentoring relationships have implications for the career advancement and leadership development of administrators. Little is known, however, about the implications of these activities in the careers of community college administrators. Thus, one objective of this study was to explore the relationship between career-related activities and career advancement of community college administrators.

The phenomenon of career advancement is complex and studying the process without taking into consideration possible organizational and structural barriers assumes

that individual activities are not mediated by the organizational context. Therefore, a second main objective of the study was to expose organizational or structural barriers that may be influencing career advancement in the community college sector.

Analysis of survey data revealed that women in this sample remain under-represented in senior level administrative positions. Women and men administrators, however, made similar investments in human capital and were equally likely to participate in a variety of professional development activities. Twenty-three percent of administrators in the sample had been promoted in the prior two years, however, none of the proposed predictor variables (educational attainment, professional development, mentoring, or gender) helped to explain career advancement.

When asked about barriers to career advancement, the top three barriers reported by this group of administrators were lack of opportunities at their current institution, an unwillingness to move or relocate, and the nature of the institution. Higher percentages of women were more likely to indicate that many of the barriers were problematic and women were also more likely than men to indicate that their career had been interrupted or constrained by family responsibilities. Institutional and individual implications are discussed, along with directions for future research.

This dissertation is dedicated to
my Mom, Sherrie Winters.

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And finally, I would like to acknowledge the 135 community college administrators who took time out of their busy lives to complete the survey. It is my hope that this research will be useful to you and your institutions.

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CHAPTER ONE

INTRODUCTION

Women's representation and role in institutions of higher education increased significantly during the 20th century. Today, women comprise over half of the undergraduate population at U.S. colleges and universities, and women represent a large population in graduate programs earning over 40% of all doctorate degrees (*Chronicle of Higher Education Almanac*, 2000). In addition, women are increasingly occupying senior faculty positions and top administrative positions in our colleges and universities. In 2000, Ross and Green reported that women accounted for 19% of all college and university presidents. Although low in absolute terms, Walton and McDade (2001) concluded that this figure was substantial given that the percentage of CEOs who are women in most other significant social institutions is lower than 19%.

Community colleges, in particular, enroll and employ higher proportions of women as compared to four-year colleges and universities (AACC, 2000; Townsend, 1995). Much of the literature on women in community colleges focuses on female students and also, to some degree, female faculty members. Less attention has been paid to women administrators - their career patterns and experiences, although many authors (Amey & VanDerLinden, 2001; Falconer, 1995; Moore, 1985; Sagaria & Johnsrud, 1991; Sandler, 1993) have noted the under representation of women in senior administrative roles. And as Twombly (1995) noted, community colleges have been slow to bring women into top leadership positions in proportion to their representation as faculty and students.

Examining the career advancement of community college administrative leaders may be particularly important given the current environmental context and the perceived lack of qualified individuals in the community college leadership pipeline. Community colleges have grown in number, size, and organizational complexity. The changes of the late 20th century have resulted in the creation of new administrative offices and positions. Other pressing issues include conflicts over institutional mission, the needs of an increasingly diverse student body, cutbacks in state and federal funding, growing competition from proprietary schools, and demands for an increase in work-based training (Laanan, 2001; Levin, 2001; Townsend & Bassoppo-Moyo, 1997). These challenges have caused many to conclude that "the development of a new generation of senior leadership for America's community colleges is imperative if these institutions are to successfully operate in increasingly complex environments" (McFarlin & Ebbers, 1998, p.34).

Developing a new generation of leaders may be one of the greatest challenges facing this sector. In 1998, the League for Innovation's Alliance for Community College Innovation conducted a survey of its member presidents to learn more about leadership transitions. When asked about leadership succession, 70% of the CEOs who planned to retire by 2001 were not confident that qualified candidates were available to fill the position within their institution and nearly half of the respondents indicated skepticism about a sufficient pool of qualified candidates within their state (Italia, 1998).

A more recent article (Evelyn, 2001) in the *Chronicle of Higher Education*, described community colleges as facing a 'leadership crisis,' as some 45% of two-year college presidents planned to retire in the next six years. These pending administrative

retirements have caused some to question where new leaders will come from and whether they will be prepared for the task. Shults (2001), for example, noted that retirements will leave an enormous gap in the collective memory and the leadership of community colleges, and he suggested that community colleges identify new leaders and give them the opportunity to acquire and practice skills they will need to lead colleges in the 21st century. The projected turnover presents an opportunity to "bring in fresh blood at a time when two-year colleges face increasingly complex demands" (Evelyn, 2001, p. A36). This pending 'leadership crisis' may also present opportunities for women to advance in a sector that is often described as overly bureaucratic and dominated by male imagery (Amey & Twombly, 1992).

Purpose of the Study

The purpose of this research is to study the career advancement and professional development of community college administrators, with particular attention to gender. Higher education researchers (Anderson, 1997; LeBlanc, 1993; McDade, 1987; McFarlin & Ebbers, 1998; Moore, 1988; Warner & DeFleur, 1993) have suggested that career-related activities and human capital investments such as obtaining educational credentials, participating in professional development, and cultivating mentoring relationships have implications for the career advancement and leadership development of administrators. Little is known, however, about the implications of these activities in the careers of community college administrators. Thus, one objective of this study is to explore the relationship between career-related activities and career advancement of community college administrators.

The phenomenon of career advancement is complex and studying the process without taking into consideration possible organizational and structural barriers assumes that individual activities are not mediated by the organizational context. Therefore, a second main objective of the study is to expose organizational or structural barriers that may be influencing career advancement in the community college sector. While fulfilling these two objectives, this study will also provide important data on the career trends and occupational mobility of community college administrators. In doing so, the results may have implications for how community colleges are addressing the "leadership crisis" described above.

Research Questions

The following research questions will be addressed by this study:

1. Are women administrators concentrated in middle level administrative positions rather than senior level positions?
2. Do differences exist between the career-related activities and human capital investments of men and women community college administrators?
3. Do differences in career-related activities and human capital investments help to explain career advancement among community college administrators? Is career advancement related to gender?
4. What individual, organizational, and structural barriers exist that prevent community college administrators from advancing into senior leadership positions? Do gender differences exist in terms of barriers to career advancement?

Definition of Terms used in Research Questions

Career Advancement: Involves position changes, often in a sequence, which serve as measures of career progress. May involve movement from one employer to another or from one position to another (Caplow, 1957; Hodson & Sullivan, 1990).

Human Capital: Education, training, skills, and experience that increase one's present and future job productivity (Reskin & Padavic, 1994).

Barriers: A characteristic or feature that may impede or restrict career advancement. Barriers can exist because of individual attributes, such as a lack of appropriate educational credential, or they can be embedded in the structural features of an organization, such as a lack of institutional support for professional development activities (Cleveland, et al., 2000).

Overview of Methodology

In order to address the research questions, quantitative methods and survey data are utilized. Quantitative studies allow for inquiry into a social or human problem by the testing of a theory composed of variables, by measurement with numbers, and by analysis with statistical procedures in order to determine whether predictable generalizations of the theory hold true (Creswell, 1994).

Two hundred and five administrators in the state of Michigan completed a survey in spring 2000 and provided information on their educational attainment, professional development activities, and mentoring relationships. In the spring of 2002, a follow-up survey was mailed to the 205 survey respondents to inquire about their occupational mobility during the previous two years. In addition, the one-page survey asked questions

on barriers or obstacles to career advancement. The survey data were analyzed in a variety of ways including the use of descriptive statistics, chi-square analysis, Kruskal-Wallis one-way analysis of variance by ranks, t-tests, logistic regression, and Rasch scaling techniques.

Significance

This study has the potential to add to the theoretical understanding of career advancement, while also providing insight into the careers of community college administrators. Knowledge about the relationships between certain activities and career advancement may directly or indirectly help to eliminate barriers facing those who seek to advance in this sector. This study may also expose certain organizational or structural elements that help to explain the disproportionate representation of women in middle rather than senior level positions. The longitudinal nature of this study will provide important and unique data on the career patterns of administrators, which may have implications for filling leadership gaps in this sector.

Overview of Dissertation

The subsequent chapters are organized as follows. The second chapter provides a comprehensive literature review of relevant theoretical perspectives and research findings. The review begins with a brief introduction to the topic of women in senior leadership positions, followed by a section on human capital theory and the variables commonly referred to in the literature as human capital. Drawing on some of the criticisms of human capital theory, the next section of chapter two details structural

arguments and barriers to career advancement. Lastly, the literature review touches upon the possible conflicts between professional and personal roles that may influence career advancement.

The literature review is followed by chapter three which describes the methodology and contains sections on the survey instrument, data collection procedures, and data analysis strategies. Chapter four presents the results of the data analysis. Finally, chapter five includes a discussion of the research findings, the limitations of the study, implications of the findings, and suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

Women Administrators

Before 1970, female leaders in the community college movement were virtually non-existent. Early women presidents of two-year colleges were marginal figures nationally. Male domination of administrative positions was taken for granted, evidenced by the fact that a 1960 profile of junior college presidents did not even mention gender (Frye, 1995). Though women play an integral role as students, faculty, and administrators in today's community colleges, their stories are relatively absent from the historical writings on the sector's founding and development. In fact, it was not until the 1970s and 1980s that women's experiences as administrators and leaders began to be noted or examined.

The most comprehensive snapshot of community college administrators is the Moore, Martorana, and Twombly, "*Today's Academic Leaders*" study from the mid-1980s. These data provided systematic analyses of two-year college administrative careers and various analyses of internal and external labor market issues (Moore, et al., 1985; Twombly, 1988, 1986). One of the many findings of the study was that women were most often found on the organizational periphery. A small percentage of individuals filling presidencies and academic vice presidencies were women, but women were more likely to be found in positions such as librarians, human resources managers, minority affairs administrators, and financial aid officers. Similarly, Tinsley et al., in 1984, observed that women administrators were likely to be responsible for human resources and personnel, but that they rarely had decision-making or budgetary responsibilities.

In addition to being on the organizational periphery, women have been disproportionately concentrated in middle-level, rather than senior level administration and in the 1980s few women were in administrative career tracks that led to top management (Tinsley, et al., 1984). Sandler (1986) explained:

> Women administrators remain concentrated in a small number of low status areas traditionally viewed as women's fields (i.e., nursing, student affairs, affirmative action) or other academic support roles such as admissions officer, registrar, or bookstore manager. Or they are locked into associate or assistant positions with little chance of advancing. (p. 176)

In a more recent study of women community college administrators in California, Faulconer (1995) concluded that although more women are filling administrative ranks, they remain concentrated in the lower levels and "the representation of women in the management of higher education is not proportionate to their presence in the workplace or in the classroom" (p.18). And in 2001, Wenninger and Conroy stated that women are increasingly occupying "dead-end administrative jobs, such as directors of programs and affirmative action offices, where their skills have a minimal chance to affect policy and they have virtually no chance for advancement" (p.4).

Theoretical Perspectives

A variety of theoretical perspectives have been applied in attempts to explain women's under representation in senior level positions and to understand career advancement. The two theoretical approaches used in this study are human capital and organizational/structural barriers.

Human Capital

Some theorists and researchers turn to the study of quantifiable variables in order to explain or understand occupational segregation and gender differences in career advancement. Human capital theorists claim that any differences in the advancement of men and women are due to differences in commitment, education, and experience (Reskin & Padavic, 1994). In essence, organizations reward individuals for investing in educational, personal, and professional experiences that enhance their worth or value to the organization (Hurley & Sonnenfeld, 1998). From the perspective of human capital theory, consequently, women are underrepresented in higher administrative positions because they have less education, training, and commitment to their jobs than men. Each of these premises will be discussed in more detail in this literature review.

Human capital variables have consistently been researched as predictors of managerial career attainment, but less so in the context of colleges and universities. It is important to note, however, that human capital variables are seldom studied in isolation when looking for thorough explanations of career advancement. Rather, human capital is often examined along with organizational factors or structural elements. Hurley & Sonnenfeld (1998), for example, found that human capital variables such as education and tenure in position and organizational factors such as the existence of different advancement career 'tracks' contributed to the explanation of who was selected for top level managerial positions.

The business and managerial literature on women's career advancement is limited by the disproportionate representation of women in the most senior positions of corporate and business settings. Women comprise only 3 to 5 percent of senior managers of

companies included among the Fortune 1000 Industrial and Fortune 500 Service companies (Federal Glass Ceiling Commission, 1995). This absence makes it difficult to study, draw conclusions, or make generalizations about women leaders and what variables seem to influence career advancement. Thus, the majority of career studies and theories in the business literature have focused on the careers of white men (Brown, 1990).

The few studies within the higher education literature that examine human capital often make comparisons between men and women using descriptive statistics or less sophisticated methods of analysis. As one example, Warner & DeFleur (1993) examined educational differences among senior administrators, including differences among fields of study, and whether senior administrators had faculty experience in their backgrounds. Using chi-square analysis, the researchers found some statistically significant differences between the experiences and areas of advanced degrees of men and women.

Rather than look at career advancement as the outcome of human capital investments, educational researchers often turn to more quantifiable measures such as salary, which may serve as a proxy for advancement. In a series of studies using the National Study of Postsecondary Faculty database, Perna (2001a, 2001b, 2001c) examined human capital variables and their relationship to a variety of employment experiences including salary, academic rank, and tenure status. Controlling for human capital, productivity, and structural characteristics eliminated any male-female gap in salaries among new assistant professors (2001a). Similarly, she found that the lower observed representation of women among tenured faculty was completely explained by gender differences in characteristics and attributes related to tenure such as the level of

human capital investment, the number of refereed publications, and the type of academic field (2001b).

Following on these results, in her study specific to community college faculty, Perna (2001c) concluded that differences in the employment experiences of female and male faculty at public two-year colleges were explained by human capital, structural, and market characteristics. Through a series of analyses, she found that the observed overrepresentation of women among faculty at two-year (rather than four-year institutions), the overrepresentation of men among full professors, and the lower salaries of women faculty were all eliminated when differences in other variables such as education and years of experience were taken into account. While education and particular experiences appear to have some explanatory power in studies of gender differences among faculty, less is known about the relationship of these variables in the careers of administrators.

Education as Human Capital

A claim of the human capital argument is that educational differences account for occupational segregation and the promotion gap (Reskin & Padavic, 1994). Beginning in the 1960s economists began investigating the "returns to schooling," which refers to the notion that education is an investment in human capital that results in outcomes and returns on that investment (Mincer, 1974). More specifically, education instills skills and knowledge in a person that raises their productivity and employability (Becker, 1964).

Several theories attempted to further explain this relationship between education and employability and may be applicable to the role of education in administrative

careers. Certification and signaling theories (Mincer, 1974) suggested that higher education may or may not have a direct relationship on what is learned versus what is required for a particular job, but that the act of receiving an education suggests or 'signals' to employers that a student is employable. Screening theories (Arrow, 1973), in comparison, emphasized that employers can use educational attainment as a cheap and easy measure of employability and 'screen' out potential job candidates, while chartering theories (Meyer, 1977) suggested that educational attainment signifies social value and characteristics that makes a person employable.

As these theories of 'return to schooling' were being developed and researched during the 1970s, the argument remained that women invest less than men in their education. This aspect of the human capital argument, however, is becoming less applicable when considering that during the 1990s, women outnumbered men among recipients of postsecondary degrees at every level except at the doctoral level (Wentling, 1998). Women's high rates of participation in higher education seems to suggest that educational attainment may have little explanatory power when looking at differences in career attainment between men and women. Yet, educational attainment at the doctoral level, where men and women's attainment does differ, may be an important variable when studying administrator advancement in higher education settings. Given that the majority of female college presidents hold a doctorate (*Chronicle of Higher Education Almanac*, 2000), an advanced degree may actually be a prerequisite or 'screening' type of variable for top administrative positions. Moore (1988) concurred when she stated, "women seeking top positions should realize that 80 percent of all presidents and provosts hold the doctorate" (p. 164).

Some researchers (Warner & DeFleur 1993) have pointed out, however, that the amount of education may not be the most relevant factor, but rather the area of study. In her study of women administrators in California, Faulconer (1995) found that 72% of women community college presidents reported having a doctoral degree, and the most frequently cited majors were educational administration, higher education, and educational leadership. This finding suggests that there may be a preferred credential in an education-related area of study.

Professional Development Activities and Training as Human Capital

Human capital theory stresses the importance of experiences such as on-the-job training activities and other opportunities to gain additional skills and knowledge, which may aid in advancement. Higher education is marked by a plethora of formal and informal professional development activities and opportunities for administrators to increase their human capital, knowledge, and skills. In addition to providing opportunities for personal improvement and advancement, McDade (1997) noted that, "professional development programs can formalize and accelerate necessary learning by providing an organized, focused forum for developing specific skills needed to solve institutional problems" (p.3). Although not supported by any empirical evidence, she stated:

> Many institutions methodically send managers to programs as a way to upgrade the administration and its collective skills. These programs increase the participation of women and minorities in the senior administrator ranks by helping them gain experience and credentials to catapult into senior positions. (McDade, 1997, p.3)

Similarly, Rosser (2000) concluded that institutions that enhance administrators' career and professional development opportunities provide internal pathways to gain access and status within the organization.

While the professional development activities of college and university presidents are often the focus of study, less is known about the modes for developing leadership and management skills of other top and mid-level administrators. Over 20 years ago, Scott stated that "higher education has not yet realized its responsibility for the professional development of its mid-level staffs" (1978, p.35). Some ten years later in his inventory of existing professional development programs, Schuster (1988) asserted that Scott's statement required little altering, although he noted that the number and apparent quality of professional development opportunities for administrators has grown over time.

Several professional development programs are open to both women and men administrators in the form of leadership training, internships, conferences, and other types of programming. McDade (1997, 1987) suggested that the large variety of programs and opportunities open to administrators could be organized into four different types – the first being national institutes which offer extended, intensive training programs and investigate education issues and management techniques. Current examples of such programs for community college administrators include the American Council on Education (ACE) Fellows Program, the Kellogg Leadership Program, the League for Innovation Executive Leadership Program, and other higher education management institutes such as those offered by Harvard and Bryn Mawr. These types of institutes provide individualized career-planning activities and teach skills needed to succeed in higher education. The ACE Fellows Program, for example, is open to faculty and

administrators aspiring to senior positions who take leave from their institutions to intern with a president or vice president at another institution. As another example, the Bryn Mawr Summer Institute is a four-week residential program open to women in middle and executive levels of higher education administration and focuses on four major areas including the academic environment, the external environment, the institutional environment, and professional development (Brown, Van Ummersen, & Phair, 2001a, 2001b).

The other types of programs in McDade's typology included administrative conferences that address specific tasks, responsibilities, and leadership roles in a specific administrative area; conventions of national associations such as the annual meeting of the American Association of Community Colleges which features prominent speakers, panel discussions, position papers; and short seminars, workshops, and meetings which provide focused instruction on specialized issues and problems in education. Some studies (Brown, 2000; Buddemeier, 1998; Touchton, et al., 1993) have addressed the participation rates of presidents in these types of professional development programs, but little else is known about the participation rates of other community college administrators. And by only describing participation rates, without looking at the relationship between these activities and career advancement, these studies provide little evidence as to what activities actually aid in the career advancement of administrators.

Administrators can also partake in other specific external activities that may provide valuable skills, knowledge, and networking opportunities, but do not fall neatly into McDade's typology. Such activities include being a paid external consultant and serving on national, state, or regional boards for professional organizations (which has

different responsibilities and accompanying activities from simply attending an organization's meeting). Few studies document such activities and their impact on administrative careers, but Faulconer (1995) in her study of women administrators in California found that the most frequently reported training to assist in career development was conference attendance, followed by participation in workshops. Faulconer's study, though, failed to explain the influence of these activities on administrative careers and provided only descriptive statistics on the activities of administrators.

While many institutions may rely on existing national and regional programs for leadership development, other professional development activities take place on individual campuses via performance and career reviews with supervisors or colleagues. Institutions may offer staff development programs, sabbaticals and study leaves, opportunities to take on additional responsibilities or serve on institutional task forces, and temporary task or job rotations. A recent Catalyst study (1996) found that women identified the activity of cross-functional job rotation as being helpful in career advancement, but these types of institution-specific activities have not been systematically investigated.

The professional development activities referenced throughout this section resemble types of on-the-job training that might occur at industrial, business, or other organizational settings. Human capital theorists stress that individuals can increase their opportunities for career advancement by learning important skills via on-the-job training (Blau, Ferber, & Winkler, 1998). As will be pointed out in the next section, however, vast differences may exist between the on-the-job training opportunities for men and women across occupations.

Barriers to Career Advancement

Rather than examining individual investments in certain career-related activities, a second theoretical approach to the study of career advancement is to address organizational or structural elements that may serve as barriers. The large number of studies that often combine human capital variables with other more structural variables implies that human capital theory, in isolation, has a number of limitations when considering women's career advancement (Bergmann, 1986; England, 1992). The most potent criticism of human capital theory is that it simply does not explain the data on occupational segregation and wage differentials based on gender (Cleveland, Stockdale, & Murphy, 2000). Educational attainment, for example, may have little influence on career advancement, because even if women have an advanced degree, a perceived lack of preparation may still exist on many campuses. Maitland (1990), while discussing obstacles for women in higher education, stated that "although women are attending college and graduate school ... there is a common perception that women are less prepared ... and as a result they receive fewer rewards such as promotions and salary increases" (p.251). In support of Maitland's statement, Chaddock (1995) studied the relationship between community college president's salaries and a number of demographic and experiential variables, and concluded that a substantial difference in average annual salary exists between male and female community college presidents. She stated, "no variables, other than sex of the president, correlated with salary differences" (p.25).

In terms of on-the-job training, Bergmann (1986) reported that women, across occupations and fields, have less than half as much on-the-job training as men do. This

training can consist of general transferable skills such as learning to use a particular piece of technology, or on-the-job training may be organization-specific such as training on an institution specific initiative. Bergmann (1986) went on to point out that on-the-job training is sometimes referred to in the economic literature as part of a "worker's investment in himself" (p.75), yet in most establishments it is employers, not workers, who control the opportunity to enroll in such training. "Women have less on-the-job training than men in part because many employers will not allow women into training programs or onto career ladders where informal training occurs" (p.75). Individual administrators, therefore, may actually have very little influence over the types of professional development or training activities that they participate in. Merely describing the participation rates of administrators in certain activities, as was often the case with the above referenced studies, may not adequately depict the opportunities for administrators that are mediated by organizational or structural influences.

Given these criticisms, reliance on human capital theory may fail to take into account important institutional factors and forces that contribute to the maintenance of occupational segregation – such as barriers to training and development activities or unequal access to information about such activities. The lack of advancement in higher education administration documented by Moore (1985), Faulconer (1995), Sandler (1993), and others may be related to certain gender-specific, discriminatory, or subtle barriers that women face, rather than a lack of appropriate skills, credentials, and experiences. The existence of such barriers led Oakes (1999) to conclude that although women have emerged as leaders in higher education, "many female administrators continue to encounter resistance and friction in their daily professional activities" (p. 57).

In her book, *The Economic Emergence of Women*, Bergmann (1986) disagreed with theorists and labor economists who studied individual characteristics of men and women and claimed no unfairness toward women.

> They say that even if women wanted other jobs, employers would be right to exclude them ... women allegedly engage in behavior that employers cannot tolerate in anyone considered for promotion to a higher status, better paid job. They [women] avoid expensive training; interrupt their careers for childbearing and child-raising; and are unwilling to travel extensively, to take transfers from one city to another, or to work overtime... the adherents of this school of thought [say] the overwhelming majority of women lack competence and commitment, and that is why they do so poorly [in the labor market]. (Bergmann, 1986, p. 64)

The main question that Bergmann explored was not whether discrimination was present or absent from workplaces, but whether it was an important factor in the sharp differences in status and pay between men and women.

Discrimination, although subtle and not always easy to ascertain (Schneer & Reitman, 1994), occurs when an organization is structured such that women are disadvantaged in comparison to men in their efforts to navigate their careers to top levels and involves actions towards individuals based solely on group membership. Rather than talk of discrimination, some researchers choose to focus on sex stereotyping or systemic barriers (Morrison & VonGlinow, 1990). The differences between the concepts, however, are not always readily apparent or made explicit in discussions and writings on women's career advancement. Stereotyping may also result in discriminatory action, but it is marked by the perceived lack of fit between women and top leadership positions which is

based on socially shared beliefs about the characteristics and attributes of men and women. Systemic barriers, in comparison, involve organizational conditions that mirror the prejudices of broader society and rather than attributing barriers to people's stereotypes, they are attributed to the "system" more broadly (Cleveland, et al., 2000).

Harriman (1996) asserted that barriers to career advancement occur in two stages. First, women's entry into the organization and access to appropriate jobs may be limited. Secondly, upward mobility in the organization may be limited by what some term a glass ceiling, which is an invisible but impenetrable barrier that denies access to the higher levels of the organization (p.181). Similarly Toren and Moore (1998) used various metaphors to discuss impediments to career advancement of women such as filters, thresholds, hurdles, and ceilings. One study found that a significant number of women indicated that the combination of the old boy's network and the glass ceiling prevented them from being appointed to prestigious posts (Buddemeier, 1998). Echoing others (Harriman, 1996; Toren & Moore, 1998), Welch (1992) summarized the three major concerns for women who become college administrators as: entry, survival, and advancement.

Kanter (1977) also identified organizational and structural elements that prevent women from advancing in organizations. In her book, *Men and Women of the Corporation*, Kanter exposed the masculine character of organizational management and discussed the problems experienced by anyone who is a minority in a majority group. She argued that the structure of opportunity within organizations, the distribution of power, and the number of women in an organization shape women's aspirations and motivation to climb the organizational ladder. This perspective focused on both formal

and informal structures of organizations – such as the entrance requirements, well-defined career ladders, traditions, colleague groups, and mentors. These structures affect career opportunities and have the potential to restrict or enhance women's roles in organizations. In opposition to human capital theory's explanation of career advancement of women, Kanter's work described how the organization fails to train women, develop their skills, or give them visible jobs that would enhance their mobility.

The Glass Ceiling

One well-documented organizational barrier for women is the glass ceiling (Federal Glass Ceiling Commission, 1995). In the early 1990s, a federal commission defined the glass ceiling as a set of subtle barriers that inhibit women and also minorities from reaching the upper echelons of corporate America, government, and academia and constitute a form of labor market discrimination that may also be maintained by society at large. Quina, Cotter, and Romenesko (1998) added to the definition when they stated that the glass ceiling is the almost *universal* experience of middle-management women who after climbing onto the career advancement ladder, now find the executive levels closed to them. Some of the practices that maintain the glass ceiling include recruiting practices based on personal contacts from the old boy network as well as stereotypes and misconceptions. The Commission's report cited the common myths that women are not aggressive enough, are unwilling to relocate, and that men make better bosses.

Drawing on the literature in a variety of disciplines, Quina, et al., (1998) detailed three categories of explanation for the glass ceiling effect: personal, situational, and societal. A person-centered explanation, which goes hand-in-hand with human capital

theory, focuses on characteristics of women such as a lack of management experience or leadership skills. A societal explanation of the glass ceiling focuses on the socialization of men and women as dominant or submissive which can only be changed through widespread social change. Quina, et al., (1998) concluded that the institutional explanatory model has the most merit, however. This model suggests that formal and informal institutional policies and practices differentially affect women. These authors stated:

> Focusing on institutional strategies ... problems perceived to be "personal issues," such as family-work stress, can be solved through institutional approaches such as providing daycare. Societally based attitudes may not be changed, but the problems they create can be mitigated (or their impact reduced) by enforcing behavioral changes such as curbing derogatory language or requiring more objective, open decision making. (p.218)

The Federal Commission offered a series of recommendations for organizations to consider, including ensuring that all individuals have equal access and opportunity to compete for positions; expanding searches for new employees to include those with varied backgrounds and experiences; initiating policies that help employees balance the demands of career and family; and establishing mentoring programs to prepare individuals for senior leadership.

Mentoring

As suggested by the Federal Glass Ceiling Commission, mentoring may play an important role in helping women to overcome barriers and possibly transcend the glass

ceiling. According to Cleveland, Stockdale, and Murphy (2000), mentoring is related to organizational advancement, career development, and also career satisfaction. Mentoring has received considerable attention in higher education literature. Moore and Salimbene (1981) defined mentoring as an intense, lasting, and professionally centered relationship between two individuals in which the more experienced and powerful individual, the mentor, guides, advises, and assists in any number of ways the career of the less experienced, often younger, upwardly mobile protégé.

Mentoring can have a significant impact on the career paths of women who aspire to advance in higher education administration (Warner & DeFleur, 1993), and mentoring, according to Brown, et al., (2001a) is the key ingredient that separates successful and unsuccessful administrators. Moore and Salimbene (1981) found that deans, vice presidents, and presidents felt mentorship had contributed to their career advancement in higher education administration and they also found that mentor relationships can determine whether a protégé has many or only a few opportunities for career advancement. Durnovo (1990) found that women who had mentors were in significantly higher administrative positions than women who had not experienced mentoring. She also found that mentoring was helpful with women's career advancement in that mentors provided encouragement and opportunities, shared information, acted as role models, encouraged the protégé to continue her education, and taught the protégé how to be politically astute.

No single model of mentorship exists, but Smith (in Brown, et al., 2001a) described three categories of mentorship seen in higher education. The first and the least intrusive type is 'mentor as supporter' whereby the mentor offers advice and the contact

may be infrequent or unplanned. A second category is slightly more intrusive and involves more pointed suggestions from the mentor as to training or educational opportunities that would help the mentee prepare for a higher level position. The third and most intensive type of mentoring involves formalized and planned sessions whereby the mentee reports to the mentor and expectations are clearly defined. Brown, Van Ummersen, and Phair (2001a) suggested that administrators may need different types of mentorship structures at different stages of their careers.

One study (Aisenberg & Harrington, 1988) documented the negative consequences of a lack of mentoring for women in academe. The authors stated that without clear goals of professional advice, "women tend not to plan intermediate five- and ten-year strategies. Rather they take smaller steps, almost literally feeling their way along" (p.45). They went on to state that without mentoring women frequently remain unaware of specific steps important to their career advancement.

One overarching concern in both the education and the business literature is that women may lack adequate mentoring opportunities (Cleveland, Stockdale, & Murphy, 2000; Hansman, 1998). Authors note the scarcity of women in upper management who are able to serve as mentors, as well as other challenges to establishing these types of relationships, such as the societal taboos about close relationships between males and females and the tendency of mentors to select proteges most like themselves (McDonald & Hite, 1998).

Sponsorship

Sponsorship, like mentoring, is another type of relationship that can shape promotion and career advancement. Sponsorship occurs when an influential person recommends or advocates the selection of an individual for a position. The advantages of sponsorship for the sponsoree include career coaching and access to positions or decision makers that might not otherwise be available (Sagaria & Johnsrud, 1992). One consequence of sponsorship is that those involved in hiring are provided with personalized information during the matching process that is more highly valued than paper credentials (Granovetter, 1981). Sponsorship can be a very time efficient way to fill positions, but it can also be exclusionary. Sagaria & Johnsrud (1992) found that over 70% of the positions at the top of the administrative hierarchy at one university were effectively closed to any candidates other than the person being sponsored. These authors observed that in organizations dominated by men, women as well as minorities benefit least from the system of sponsorship.

Structure of Opportunity within Organizations

In addition to the barriers cited above such as the glass ceiling phenomenon and the lack of mentors, women's placement in organizations and the workings of an internal labor market may affect the structure of advancement opportunities within organizations (Bergmann, 1986). The extent to which institutions promote from within or hire from external markets largely determines an individual's opportunity for advancement within an institutional setting (Johnsrud & Rosser, 1999). With regard to internal labor markets and structures of opportunities that may be present in community colleges, specific

characteristics exist including boundaries, job ladders or career lines, and fixed or limited entry points (Twombly, 1986). According to Bergmann (1986), the particular job ladders associated with careers result in ladders that lead upward or ladders that lead to a dead-end. Women are typically characterized as being on the shorter, dead-end ladders (Bergmann, 1986). Thus, when women find themselves in careers on the organizational periphery, their particular job ladder may prevent them from advancing into the upper echelons of an organization.

One labor market phenomenon, which has received considerable attention in fields such as sociology and labor and industrial relations, is occupational mobility (Felmlee, 1982; Rosenbaum, 1979; Sicherman, 1990; Stewart & Gudykunst, 1980). With the exception of a few studies in higher education (Johnsrud, 1991; Sagaria, 1988; Twombly, 1986), the occupational mobility and career patterns of administrators have not been thoroughly studied. Twombly (1986) detailed the four modes of career mobility in colleges and universities: through positions at the same institution with greater status and responsibility, through evolving jobs at the same institution, through departure from one institution for a higher position at another institution, and through acceptance of a lower position at an institution with higher status. McDade (1987) posited that the hierarchy of colleges and universities with its limited opportunities for advancement forces administrators to move to other institutions in order to move up the hierarchy, and others (Brown, Van Ummersen, & Phair, 2001a) noted a tendency at many institutions to assume that external candidates are better than internal candidates. While some evidence indicates that this movement described by McDade may be necessary to obtain a community college presidency (Amey & VanDerLinden, 2001; Vaughan, 1994), the

career mobility patterns of other senior administrators remains unexamined in the literature. The lack of literature and information on career patterns and mobility limits the understanding of women administrators' experiences in the community college labor market.

Community College Characteristics

While the internal labor market workings, as well as institutional factors or structural elements that influence career advancement in community colleges are seldom the focus of study, authors have noted the conflict between the images of community colleges and the specific structures of the organization (Amey, 1999; Twombly, 1995). As Bain and Cummings (2000) point out, certain barriers are intrinsic to particular organizational settings or professional communities. Community colleges may have specific structural elements and characteristics that make them less welcoming to women administrators.

Community colleges have been categorized as bureaucratic and hierarchical (Birnbaum, 1988) as well as being dominated by male and elite imagery (Amey & Twombly, 1992). In their analysis of community college governance structures, Reyes and Twombly (1987) concluded that community colleges are "perceived to have hierarchical modes of commands, written rules and regulations governing the participants' behavior, and highly authoritarian decision-making processes" (p.10). In a study of North Carolina community college administrators, Gillett-Karem (1997) reported that over 60 percent of women administrators saw the nature of the institution itself as a career obstacle. Based on these characterizations of community colleges, Amey

(1999) argued that the question is not whether women are qualified and able to be community college leaders, but whether the community college offers an environment in which women choose to exercise leadership. Studies in the private sector (Hardesty & Jacobs, 1986) indicated that women may become disillusioned with the mores of organizations and the quality of life that results when trying to fit the male organizational mold, and a similar phenomenon may be happening in community colleges.

Multiple Roles of Women

Many of the observations made by authors and researchers in terms of career advancement, particularly within human capital theory, mention the role of the family and its relation to women's career development. Becker (1985) explained that family responsibilities influence investments in human capital, continuity of labor force participation, the types of employment sought, and the level of commitment to the job. Thus examining either human capital or structural variables without taking into account family and personal responsibilities may limit the understanding of careers. Early theorists (Polacheck, 1981; Mincer & Polacheck, 1974), recognizing that women devoted substantial portions of their adult lives to childbearing and child-rearing, suggested that women are cognizant of this aspect of their lives and choose to enter occupations that allow for ease of exit and reentry, as well as jobs that do not require the learning of skills that may erode during periodic interruptions of employment. Consequently, then, early human capital theorists concluded that women do not have the training, backgrounds, or previous employment experience that would qualify them for senior administrative positions.

Discussions of family/career conflicts in the higher education literature usually focus on women faculty. For example, Riemenschnieder and Harper (1990) reported that almost two-thirds of women faculty, but only one-third of men faculty, felt overwhelmed trying to meet both child care and employment demands. Perna (2001d) concluded that the lower representation of married women and women with children among the nation's college and university faculty may suggest the difficulties associated with fulfilling both family and career responsibilities. In her study of faculty, she found that the odds of holding a part-time, nontenure-track position were higher for married women than for other women even after controlling for race, human capital investments, and other structural characteristics.

In one descriptive study that did focus on administrators, rather than faculty, Marshall and Jones (1990) found that two-thirds of female higher education deans, administrators, and counselors believed that childbearing had negatively affected their careers, particularly in terms of their professional advancement and mobility. Oakes (1999) posited that "the long, irregular hours usually required of administrators often lead to a lack of sufficient time for family" (p.60). In her interviews of women presidents, vice provosts, and deans, Glazer-Raymo (1999) found that one overriding theme was the difficulty of balancing personal and professional positions and that these dual roles were perceived by women administrators to be career inhibitors. And Gillett-Karam (1997) reported that over 30 percent of women administrators in North Carolina saw children and family responsibilities as a career barrier. Such findings and conclusions suggest that the traditional values, which hold women responsible for household duties and child-rearing may conflict with women's desires to have successful and fulfilling careers.

Summary of Literature

As evidenced by this literature review, different frameworks and theoretical perspectives can be employed when examining career advancement. Building upon the economic, business, and managerial literature, researchers in higher education are compiling a body of literature that describes the career advancement of women in academia. Faculty careers, however, dominate the career advancement literature in higher education. In addition, when administrators are the subjects of study, it is seldom in the community college sector and the focus rarely drops below the presidential level to other administrative leaders.

Many of the studies described in the literature are limiting because they provide only descriptive statistics of participation rates in career-related activities. Multivariate analysis is required to understand the extent to which any observed differences in the career advancement of men and women are explained by variations in educational attainment, participation in professional development, and mentoring activities.

Given these gaps in the literature, this study has the potential to contribute to the understanding of the theoretical perspectives, as well as adding valuable insight into the careers of community college administrators. Knowledge about whether certain activities appear to matter in the career advancement of community college administrators may directly or indirectly help to eliminate barriers facing those who seek to advance in this sector. This investigation may also expose possible organizational or structural elements that help to explain the disproportionate representation of women in middle rather than senior level positions.

After reviewing the literature, the following four research questions emerged.

1. To what extent are women community college administrators concentrated in middle level administrative positions rather than senior level positions?
2. Do differences exist between the career-related activities and human capital investments of men and women community college administrators?
3. Do differences in career-related activities and human capital investments help to explain career advancement among community college administrators? Is career advancement related to gender?
4. What individual, organizational, and structural barriers exist that prevent administrators from advancing into senior leadership positions? Do gender differences exist in terms of barriers to career advancement?

CHAPTER THREE

METHODOLOGY

This quantitative research study addressed the career advancement of community college administrators with attention to gender, human capital investments, rates of promotion, and barriers to career advancement.

Data Collection

Phase I - Sample and Instrument

Phase I of this research relied on a stratified random sample of 300 community college administrators in the state of Michigan. The sample was drawn using the 1999 Michigan Education Directory. The Directory listed names, positions, and titles of administrators in Michigan's 29 community colleges. The stratification variable for selecting the sample was administrative area. Approximately ten different administrative areas were represented in the directory, but due to the size of some colleges and differing organizational structure, not every community college listed all ten areas. Therefore, rather than sample by college, administrators were classified by position and approximately 30 administrators from each area were randomly selected to receive the instrument.

The instrument was, in part, a replication of an instrument used by Moore et al., in 1985. The original Moore et al., instrument was adapted for language and terminology and consisted of open-ended response items, closed-ended response items, and Likert scale questions. Additional questions were added to the original instrument based on an extensive literature review. The instrument (Appendix A) was pilot tested with

community college administrators and two peer reviewers in January 2000. It was also reviewed by three experts at the American Association of Community Colleges (AACC) who had previously administered surveys to national samples of community college administrators. Changes made to the instrument included: re-wording and re-arrangement of survey questions and deletions of some questions in order to decrease the page length.

Several steps were taken to encourage a high response rate. During February - May 2000, two mailings of the survey packet were sent along with one follow-up postcard. In addition, non-respondents were contacted via email when email addresses were available on the institutional web pages. These efforts yielded 205 completed surveys for a 68% response rate.

Characteristics of the Respondents in 2000

Twenty-eight of the 29 community colleges in Michigan were represented in the sample. The 205 respondents came from a variety of senior level positions including Presidents and Chancellors, Chief Academic Officers and Provosts, Occupational Education Directors, Directors of Continuing Education, Chief Student Affairs Officers, Financial Aid Directors, Chief Business and Administrative Officers, Human Resources Directors, Learning Resources Directors, and Directors of Information Technology and Distance Education (Table 1). Seven percent held the title of President, Chancellor, or Provost. Seventeen percent held titles of Vice President (including Executive, Associate, and Assistant Vice Presidents). Twenty-eight percent were Deans (including Associate and Assistant Deans). Forty-four percent of respondents were at the Director level and four percent had other titles such as Coordinator or Officer. The administrative areas and

titles of survey respondents were similar to the original sample of 300 administrators (see Table 1).

Women accounted for 45.6% of the respondents in 2000, which was equivalent to the percentage of women in the original sample of 300 administrators. When asked about race/ethnicity, over 88% of the sample indicated White/Caucasian, 4.4% indicated Black/African American, 1.5% were of Hispanic origin, 1% were multi-racial, less than 1% indicated Asian, less than 1% indicated Native American, and 3.4% did not indicate their race or ethnicity. The average age of respondents in 2000 was 52 years old. The race/ethnicity and age of the 300 administrators in the original sample was unknown.

Phase II – Sample and Instrument

During May 2002, the 205 survey respondents from the Phase I data collection were contacted to participate in a follow-up mail survey (Appendix B). The instrument consisted of questions related to any career or title changes over the past two years. It also included a section on possible barriers or obstacles to career advancement. The questions related to barriers were developed based on an extensive literature review and also incorporated questions asked by Gillett-Karem (1997) during a study of community college administrators in North Carolina. The instrument was pilot tested with two Michigan community college administrators who were not part of the original sample.

Of the 205 respondents in 2000, six administrators had retired during the previous two years which resulted in a target sample of 199 administrators. One complete mailing of the instrument and follow-up via email to non-respondents resulted in 135 completed surveys for a 68% response rate (32% attrition rate) for the 2002 survey and a 45%

overall response rate given the original sample of 300 administrators in 2000. Two additional surveys were returned, but were missing data and were thus excluded from the data analysis.

Characteristics of the Respondents in 2002

The 135 respondents came from a variety of senior level positions in 28 different community colleges. The title and position percentages differed slightly from the respondents in 2000 and from the original sample of 300 administrators (Table 1). Eight percent of respondents in 2002 held the title of President, Chancellor, or Provost. Sixteen percent held title of Vice President (including Executive, Associate, and Assistant Vice Presidents). Twenty-four percent were Deans (including Associate and Assistant Deans). Forty-seven percent of respondents were at the Director level (including Executive Directors) and four percent had other titles such as Coordinators.

In 2002, women made up 49.6% of the sample. Interestingly, in phase II of the research, a large percentage (18%) of respondents chose not to indicate their race or ethnicity. Over 76% of administrators indicated White/Caucasian, 4% indicated Black/African American, 1% indicated Hispanic, and 1% indicated multi-racial. The average age of respondents in 2002 was 53 years old.

Table 1

Characteristics of Sample and Respondents

Characteristics	Original Sample (N=300)	Respondents in 2000 (N=205)	Respondents in 2002 (N=135)
Percentage female	45.5%	45.6%	49.6%
Average Age	Unknown	52	53
Race/Ethnicity			
White	Unknown	88.8%	76.1%
Black/African American	Unknown	4.4%	3.7%
Hispanic Origin	Unknown	1.5%	0.7%
Asian	Unknown	0.5%	0.0%
Native American/American Indian	Unknown	0.5%	0.0%
Multi-racial	Unknown	1.0%	1.4%
Unknown/Did not indicate	Unknown	3.4%	17.9%
Administrative Title			
President/Chancellor/Provost	9.0%	7.0%	8.0%
Vice President	16.0%	17.0%	16.0%
Dean	23.0%	28.0%	25.0%
Director	48.0%	44.0%	47.0%
Coordinator	4.0%	4.0%	4.0%
Administrative Area			
President/Chancellor	10.0%	7.3%	6.9%
Chief Academic Officer/Provost	10.0%	14.5%	11.2%
Occupational Education	10.0%	7.8%	8.2%
Continuing Education/Industry Liaison	10.0%	12.2%	11.9%
Chief Student Affairs Officer	10.0%	8.7%	10.4%
Financial Aid/Other Student Affairs Areas	10.0%	11.2%	11.9%
Admin Areas/Business Affairs/IR	10.0%	10.2%	9.0%
HR/Resource Development	10.0%	8.7%	8.9%
Learning Resources	10.0%	9.7%	11.9%
Distance Education/Info Technology	10.0%	9.7%	9.7%

Data Analysis

Data analysis proceeded in several steps and utilized data and variables from both phases of this research in order to address the research questions.

Research Question 1

To what extent are women administrators concentrated in middle level administration and Director level positions, rather than senior level positions such as Presidents, Vice Presidents, and Deans?

Variable in Question 1

During Phase II of this research, administrators were asked for their full administrative title. These titles were coded into the following categories: 1) Presidents and Chancellors; 2) Vice Presidents and Provosts (including Executive, Associate, and Assistant Vice Presidents); 3) Deans (including Associate and Assistant Deans); 4) Directors and Coordinators. The re-coded title was the dependent variable, while gender was the independent variable of interest.

Data Analysis for Question 1

Descriptive statistics and Kruskal-Wallis one-way analysis of variance by ranks (KWANOVA) were used to examine whether women were disproportionately represented in middle rather than senior level administrative positions. KWANOVA was selected as the method of analysis because the variable of administrative title was ordinal and rank ordered (e.g., Presidents are the highest rank on the administrative hierarchy,

while Directors are a lower rank on the hierarchy). The KWANOVA is similar to chi-square analysis in that it uses the chi-square sampling distribution, but is dissimilar from chi-square analysis in that it relies on rank-ordered rather than dichotomous or categorical variables. In all instances throughout the four research questions, a probability value of .05 was set to determine significance.

Research Question 2

Do differences exist between the career-related activities and human capital investments of men and women community college administrators?

Variables and Data Analysis in Question 2

Gender remained as the independent variable of interest for research question 2. The dependent variables were educational attainment, participation in professional development activities, and mentoring activities, all of which were discussed extensively in the literature review as being part of one's human capital and/or career-related activities. These variables were collected during Phase I of the data collection. The specific questions used to collect this data are in Appendix A and are described in detail below.

Level of Education: The respondents were asked to provide their educational background including all earned degrees. Level of education was measured by the highest earned degree. All respondents had obtained at least a Bachelor's degree, thus highest earned degree was re-coded into three levels: Bachelor's degree (coded as 1), Master's degree,

including MBA and MLA (coded as 2), and Doctorates, including Ed.D. and Ph.D. (coded as 3). Because educational level is an ordinal rank-ordered variable (e.g., Doctorate was the highest level, while Bachelor's was the lowest), the Kruskal-Wallis one-way analysis of variance (KWANOVA) was used to determine significant gender differences ($p \leq .05$) in educational attainment.

Professional Development Activities: Respondents were asked whether they had participated in 12 external professional development activities, as well as 7 internal professional development activities (listed in Appendix A). External activities were those that occurred in professional settings off campus, while internal activities were those that occurred at an administrator's institution. Participation rates in these activities were measured for each individual activity, as well as counted to provide an overall number of activities that administrators had participated in. The overall number of professional development activities was recoded into the following ranges for both external and internal activities: 0-1 activities, 2-3 activities, 4-5 activities, and 6 or more activities.

Chi-square analysis was used to examine significant gender differences ($p \leq .05$) in the participation rates for each of the professional development activities. In addition to examining each activity individually, KWANOVA was used to determine whether there were significant differences in the overall number (recoded as ranges) of professional development activities for men and women administrators.

Mentoring: Respondents were asked if they had a mentor in higher education. The following definition of mentor was provided: the term mentor is often used to identify a

long-term, professionally centered relationship between two individuals in which the more experienced individual, the mentor, guides, advises, and assists in any number of ways the career of the less experienced protégé. Respondents were asked whether they felt they had a mentor during their careers in higher education administration and could respond with yes (coded as 1) or no (coded as 0). Chi-square analysis was used to reveal significant gender differences ($p \leq .05$) in mentoring.

Research Question 3

Do differences in career-related activities and human capital investments help to explain career advancement among community college administrators? Is career advancement related to gender?

Variables in Question 3

The dependent variable of interest for research question 3, collected during Phase II of the data collection, was a dichotomous measure of whether respondents have advanced in their career since the initial data collection during Phase I of this study (Appendix B, survey question 6).

In addition to gender, the variables in research question 2 (educational attainment, number of professional development activities, and mentoring) were the independent variables of interest in research question 3.

Data Analysis for Question 3

Logistic regression analysis was used to explain the relationship between the independent variables (gender, educational level, number of external professional development activities, number of internal professional development, mentoring) and the dichotomous outcome variable of whether the administrator had advanced in their career since the initial data collection in 2000. Logistic regression was selected as the method of analysis for research question 3 because the outcome or dependent variable of career advancement was dichotomous and because the independent variables were a mixture of continuous and categorical variables.

For the logistic regression analysis the coding of the variables remained the same as in research question 2. The education variable had three levels: Bachelor's, Master's, and Doctorate. The numbers of external and internal professional development activities for each administrator coded into the following ranges: 0-1 activities, 2-3 activities, 4-5 activities, and 6 or more activities. Mentoring was a dichotomous variable of whether or not the respondent indicating having a mentor in higher education.

The logistic regression model is similar to the traditional linear regression model in that it relies on the equation: $Y= \alpha + \beta_1 X_1 + \beta_2 X_2 + \ldots \beta_k X_k$ where α is the intercept, β are regression coefficients, and X are the predictor variables. In logistic regression though, Y is the dichotomous outcome variable, rather than a linear measure, and is expressed as logit (π). More specifically, for a dichotomous variable, Y, that is scored 1 or 0, the probability that $Y=1$ is expressed as π. The term logit (π) refers to the logit function of this probability and equals the natural log of $\pi/(1-\pi)$ (Agresti, 1996; Jaccard, 2001).

Logistic regression is dissimilar from linear models in that it does not provide an *F*-statistic to test overall model fit, but logistic regression does provide comparable likelihood chi-squared tests or a Wald statistic. Logistic regression also does not provide an R^2 measure of model fit, but the log-likelihood can be converted to a "generalized R^{2}" value. In this case, the chi-square tests computed from the log likelihood statistics were examined along with individual parameter estimates. These parameter estimates provided a summary of the influence of a variable on the log odds of having a characteristic or experiencing an event. In this case, the event under study was promotion.

Research Question 4

What individual, organizational, and structural barriers exist that prevent administrators from advancing into senior leadership positions? Do gender differences exist in terms of barriers to career advancement?

Variables in Question 4

The variables of interest for research question 4 come from Phase II of the data collection and include the following barriers: 1) lack of an appropriate degree or credential, 2) unwillingness to move or relocate, 3) lack of opportunities at current institution, 4) limited time for professional development, 5) limited organizational support for professional development, 6) lack of administrative experience, 7) the nature of the institution/leadership/politics, 8) lack of mentoring opportunities, 9) lack of peer/colleague support, 10) late entry into administration, 11) race/ethnicity, 12) gender, 13) age, and 14) other personal characteristics. These fourteen barriers were measured on

a 5-point Likert scale where administrators indicated their level of agreement (1=Strongly Disagree to 5= Strongly Agree) with the statements about barriers to career advancement. Administrators were also asked yes (coded as 1) or no (coded as 0) questions as to whether their career paths had been interrupted by child-rearing/family responsibilities, constrained geographically by their spouse/partner's employment, or interrupted by other factors.

Data Analysis for Question 4

After descriptive statistics and chi-square analyses were used to describe barriers as well as the interruptions and constraints on career paths, a Rasch measurement model was utilized to address research question 4. Rasch measurement converts rating scale observations, in this case, the 14 Likert scale items related to career barriers, into more useful linear measures by computing the probability that a specific administrator (*n*) will rate a particular item (*i*) using a specific rating scale category (*x*) (Andrich, 1978). Bond and Fox (2001) provide a useful metaphor when stating, "when we analyze data using a Rasch model, we get an estimate of what our construct would be like if we were to create a ruler to measure it" (p.8). Specifically the rating scale model is written as:

$$\pi_{nix} = \frac{\exp \sum_{j=0}^{x} [\beta_n - (\delta_i + \tau_j)]}{\sum_{k=0}^{m} \exp \sum_{j=0}^{k} [\beta_n - (\delta_i + \tau_j)]}$$

where π_{nix} is the probability of administrator n responding with a rating of x on item i. β_n is the attribute parameter of administrator n, δ_i is the attribute parameter of item i, and τ_j is the difficulty of the rating step from level j-1 to level j on item i, where $\tau_0 = 0$.

Calibration of data with the Rasch model resulted in separate parameter estimates (and standard errors for estimates) for each individual administrator and for each of the 14 items. The attribute parameter indicated an administrator's tendency to perceive barriers to their career advancement. High values of the parameter estimate indicate that individuals perceive barriers as being problematic to their career advancement (e.g., administrators strongly agreed with statements about barriers), while lower values of the estimate indicate that individual administrators perceived barriers as not being a problem to their career advancement (e.g., administrators disagreed with statement about barriers). These parameter estimates were used for subsequent analysis of gender differences. Prior to examining gender differences, however, several statistics for each survey item and for each person were examined to determine the fit of the model.

Model Fit

The resulting Rasch model indicated that it was most appropriate to treat the 14 barriers as one factor, rather than multiple factors, and that one factor accounted for over 52% of the variance in the model. Rasch modeling provides two sets of general guidelines to help determine the validity of a set of measures (Bond & Fox, 2001). First, the Rasch model provides information that helps to assess whether all items (in this case the 14 barriers) work together to measure a single variable. And second, the Rasch model provides information as to whether each administrator was responding in an acceptably

predictable way given the expected hierarchy of responses (Wright & Stone, 1979). This information is conveyed through fit statistics.

Infit and outfit statistics for each administrator and for each item were calculated, and these statistics indicated how accurately or predictably the data fit the model. The mean square outfit statistic is defined as the unweighted mean of the squared standardized residuals of the observed ratings from their expected values. The mean square infit statistic weights each squared standardized residual by its variance. Fit statistics are reported as chi-square values, divided by their degrees of freedom which results in an expected value of 1.00 and a range from 0.00 to infinity. A mean fit statistic greater than 1.00 suggests the presence of unexpectedly large residuals, and a mean square outfit value of less than 1.00 indicates less random variability than expected. In general, elements with mean square fit statistics ranging from 0.6 to 1.4 are considered to show adequate fit to the model (Wright & Linacre, 1994).

Person Fit Statistics

For individual administrators, Rasch estimates of the barriers to career advancement on the logit scale ranged from -4.05 to .89, with a mean measure of -.99. (Twelve administrators [9%] strongly disagreed with all 14 statements about the barriers and were therefore not considered during item calibration estimation.) The infit and outfit statistics revealed whether persons (as well as items) had noisy or muted response patterns. Noisy patterns indicated more erratic or haphazard responses than predicted by the Rasch model, while muted response patterns indicated less variability than predicted by the Rasch model. Twenty-six (19%) administrators displayed extreme misfit with

mean fit statistics exceeding 1.5 indicating noisy response patterns, while 26 administrators (19%) had fit statistics below 0.6 indicating muted response patterns. These percentages suggest that a narrower Likert rating scale with less than 5 points may have been more appropriate for these barriers (Wright, 1991).

Item Fit Statistics

Estimates and fit statistics for each item are presented in Table 2. The estimates range from -.71 (an unwillingness to move or relocate) to .83 (race/ethnicity). 'Unwillingness to move or relocate' was the easiest item for administrators to endorse followed by 'lack of opportunities at current institution,' while 'race/ethnicity' and 'lack of administrative experience' were the most difficult items for administrators to endorse. Two items had fit statistics that exceeded the acceptable range and had noisy response patterns. 'Lack of educational degree or credential' and 'unwillingness to move or relocate' have the most extreme misfit (outfit MS of 1.56 for both items) and thus do not fit the model as well as the other items. For the majority of the 14 items, however, the statistics in Table 2 indicate acceptable fit of the data to the rating scale model.

Table 2

Rasch Model: Item Fit Statistics

Item	Estimate	Error	Infit MS	Infit ZSTD	Outfit MS	Outfit ZSTD
Unwillingness to move	-.71	.10	1.37	2.7	1.56	3.5
Lack of opportunities at current institution	-.65	.09	1.18	1.4	1.15	1.0
Nature of institution	-.41	.09	.92	-.7	.98	-.1
Limited time for PD	-.19	.10	.87	-1.1	.87	-.9
Lack of mentoring	-.19	.10	.57	-4.0	.62	-3.0
Lack of degree/credential	-.16	.10	1.38	2.5	1.56	3.1
Limited organizational support for PD	-.04	.10	1.15	1.0	1.17	1.1
Lack of peer support	.09	.10	.70	-2.4	.73	-1.8
Gender	.11	.10	1.11	.8	1.08	.5
Other personal characteristics	.17	.11	1.11	.7	1.24	1.3
Age	.23	.11	.90	-.7	.97	-.2
Late entry	.39	.12	.78	-1.4	.98	-.1
Lack of experience	.53	.12	.90	-.7	.83	-1.0
Race/ethnicity	.83	.14	1.14	.7	.96	-.2

After examining the Rasch model fit statistics, a t-test was used to reveal gender differences in the parameter estimates. A probability level of .05 was used to determine significance.

Research Assumptions

1. This research assumes that the sample is representative of administrators in the state of Michigan.
2. This research assumes that participants' self-reported information is accurate.
3. This research assumes that the instruments being used are sensitive enough to detect the concepts being studies.

CHAPTER FOUR

FINDINGS

This chapter presents the results of the statistical analysis of the survey data. The purpose of this study was: (1) to examine the representation of women in senior level administrative positions at community colleges; (2) to determine differences in the professional development activities of men and women community college administrators; (3) to determine any predictors of career advancement; and (4) to determine barriers to career advancement and any gender differences in barriers.

Research Question 1

As expected based on the literature review, women survey respondents were less likely than men to hold the administrative titles of President, Vice President, and Dean. Nearly 63% of women respondents held the title of Director or Coordinator, while only 40% of men were Directors or Coordinators (Table 3). The Kuskal-Wallis test revealed that these differences were significant (Kruskal-Wallis Test Chi-Square = 6.67, $df=1$, p=.01).

Research Question 2

Educational Attainment

A smaller percentage of women administrators, as compared to men, hold a doctorate (Ed.D. or Ph.D.), but the difference was not statistically significant (Kruskal-

Wallis Test Chi-Square = 2.40, *df=1*, p=.12). Approximately 19% of women have an Ed.D. or Ph.D., while 30.9% of men have an Ed.D. or Ph.D. (Table 4).

Table 3

Gender Differences in Administrative Titles

Administrative Title	% Men (N=68)	% Women (N=67)
President or Chancellor	10.3% (N=7)	6.0% (N=4)
Vice President or Provost	20.6% (N=14)	11.9% (N=8)
Dean	29.4% (N=20)	19.4% (N=13)
Director or Coordinator	39.7% (N=27)	62.7% (N=42)

Table 4

Educational Attainment of Administrators

Educational Attainment	% Men (N=68)	% Women (N=65)*
Bachelor's	11.8% (N=8)	15.4% (N=10)
Master's (including MLS and MBA)	57.4% (N=39)	66.2% (N=43)
Doctorate (Ed.D. or Ph.D.)	30.9% (N=21)	18.5% (N=12)

*Two female respondents did not provide highest level of educational attainment.

Professional Development Activities

Few significant differences existed between the external and internal professional development activities of men and women administrators. Table 5 details the percentage of men and women participating in each external professional development activity and the corresponding chi-square value and probability level. Table 6 details the percentage of men and women participating in each internal professional development activity and the corresponding chi-square value and probability level. In instances where cell counts were less than five, Fisher's Exact Test probability is reported.

In terms of external professional development, women administrators were more likely to participate in specialized workshops or seminars for women than their male counterparts. In terms of internal professional development activities, women administrators were more likely than men administrators to participate in a career review to plan ways to acquire additional skills, education, and training. No other significant gender differences existed.

Table 5

External Professional Development Activities: Participation Rates

External Professional Development Activity	% of Males participating	% of Females participating	Pearson chi-square value	Prob. Level
Paid external consultant	50.7% (N=34)	41.8% (N=28)	1.08	p=.30
American Council on Education Fellowship/Internship	4.5% (N=3)	0.0% (N=0)	3.12	p=.12
W.K. Kellogg Leadership Program Fellowship	4.5% (N=3)	1.5% (N=1)	1.06	p=.37
League for Innovation Executive Leadership Program	9.1% (N=6)	4.5% (N=3)	1.07	p=.49
Other administrative fellowship or internship	12.3% (N=8)	17.9% (N=12)	0.81	p=.37
Higher education management institute	13.6% (N=9)	9.0% (N=6)	0.73	p=.39
Serve on board of directors of state or regional professional organization	56.7% (N=38)	62.7% (N=42)	0.50	p=.48
Serve on board of directors of national professional organization	22.7% (N=15)	22.7% (N=15)	0.00	p=1.0
Attend specialized professional workshops or seminars for women	23.9% (N=16)	50.8% (N=33)	10.22	p=.00*
Attend specialized professional workshops or seminars for minorities	22.7% (N=15)	22.7% (N=15)	0.00	p=1.0
Publication of books, articles, technical, or curriculum reports	29.2% (N=19)	28.4% (N=19)	0.01	p=.91
Presentations at national, state, or regional conferences	70.1% (N=47)	71.6% (N=48)	0.04	p=.85

* Significant at the .001 level

Table 6

Internal Professional Development Activities: Participation Rates

Internal Professional Development Activity	% of Males participating	% of Females participating	Pearson chi-square value	Prob. Level
Formal written performance review	79.1% (N=53)	79.1% (N=53)	0.00	p=1.00
Career review to plan ways to acquire additional skills, education, training	31.3% (N=21)	49.3% (N=33)	4.47	p=.04*
Inservice staff development programs/courses	94.1% (N=64)	97.0% (N=65)	0.67	p=.41
Temporary task or job rotation at a similar level	19.1% (N=13)	31.3% (N=21)	2.68	p=.10
Participation in special institutional task forces, committees, and commissions	94.1% (N=64)	97.0% (N=65)	0.67	p=.41
Opportunity to take on additional responsibilities above job description	88.2% (N=60)	88.1% (N=59)	0.00	p=.98
Sabbatical or study leave	7.5% (N=5)	7.5% (N=5)	0.00	p=1.00

* Significant at the .05 level

Total Number of Professional Development Activities

Men and women administrators participated in similar overall numbers of professional development activities. For example, 14.7% of men participated in six or more external activities, as compared to 14.9% of women (Table 7). The Kruskal-Wallis one-way analysis of variance of ranks revealed no significant gender differences in the number of external professional development activities (Kruskal-Wallis Test Chi-Square=.09, $df=1$, p=.77).

A much higher percentage of women administrators, however, had participated in six or more internal activities (20.9% of women compared to 7.4% of men) (Table 8). The Kruskal-Wallis one-way analysis of variance of ranks revealed that these differences were not statistically significant (Kruskal-Wallis Test Chi-Square = .2.45, *df=1*, p=.12).

Table 7

Number of External Professional Development Activities

Number of activities	Percentage of men (N=68)	Percentage of women (n=67)
0-1 activities	26.5% (n=18)	23.9% (n=16)
2-3 activities	30.9% (n=21)	31.3% (n=21)
4-5 activities	27.9% (n=19)	29.9% (n=20)
6 or more activities	14.7% (n=10)	14.9% (n=10)

Table 8

Number of Internal Professional Development Activities

Number of activities	Percentage of men (N=68)	Percentage of women (n=67)
0-1 activities	4.4% (n=3)	1.5% (n=1)
2-3 activities	13.2% (n=9)	14.9% (n=10)
4-5 activities	75.0% (n=51)	62.7% (n=42)
6 or more activities	7.4% (n=5)	20.9% (n=14)

Mentoring

Administrators were asked whether they had a mentor during their career in higher education administration. The term mentor was defined as a long-term, professionally centered relationship between two individuals in which the more experienced individual (the mentor) guides, advises, and assists in any number of ways the career of the lesser experienced protégé. Statistically, men and women administrators in the sample were equally likely to have a mentor, although the percentage of women administrators with a mentor was higher. Over 62% of women indicated having a mentor, while 55.9% of men indicated having a mentor (chi-square=.54, *df=1*, p=.46).

Research Question 3

Twenty-three percent (N=31) of the sample indicated that they had been promoted during the previous two years. Another 5% (N=7) of administrators had titles changes during the previous two years, however, these changes were due to reorganization of the college rather than due to promotion. And the remaining percentage of administrators (72%) did not indicate promotions or changes in job titles since the 2000 survey. Prior to logistical regression, descriptive statistics and chi-square analysis were used to reveal initial gender variation in those who had been promoted versus those who had not been promoted. Although not statistically significant, a slightly higher percentage of females had been promoted (25.4% of women, 20.6% of men; chi-square=.44, *df=1*, p=.51).

Logistic Regression Results

Five variables were entered into a logistic regression analysis in an attempt to build a predictive model for the dependent variable of promotion. The five independent variables and possible predictors of promotion were: gender, level of education, mentoring, number of external professional development activities, and number of internal professional development activities. A model containing all two-way interactions was the first logistic regression model that was examined. Table 9 details the model fit statistics, as well as the coefficient estimates for the two-way interaction model. Table 9 indicates that none of the parameter estimates for the interactions made a statistically significant contribution to the prediction of the dependent variable of promotion. Because none of the interactions terms were significant, it was appropriate to run a main effects model. Table 10 details the results of the main effects model.

Table 9

Two-Way Interaction Model

Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
-2 Log L	143.90	130.51

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	13.39	15	0.57

Analysis of Maximum Likelihood Estimates

Parameter	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-3.34	3.06	1.19	0.28
Gender	1	-1.61	2.32	0.48	0.49
Edu	1	1.34	1.56	0.73	0.39
Gender*Edu	1	0.49	0.86	0.33	0.57
Mentor	1	3.00	2.41	1.55	0.21
Gender*Mentor	1	-0.21	1.05	0.04	0.85
Edu*Mentor	1	-1.32	0.94	1.99	0.16
Ext PD	1	-1.08	1.52	0.50	0.48
Gender*Ext PD	1	-0.51	0.51	1.03	0.31
Edu*Ext PD	1	0.50	0.45	1.25	0.26
Mentor*Ext PD	1	-0.39	0.56	0.48	0.49
Int PD	1	0.37	1.68	0.05	0.82
Gender*Int PD	1	0.81	0.75	1.17	0.28
Edu*Int PD	1	-0.73	0.77	0.90	0.34
Mentor*Int PD	1	0.57	0.78	0.53	0.47
Ext PD*Int PD	1	0.32	0.46	0.48	0.49

Table 10

Main Effects Model

Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
-2 Log L	143.90	140.77

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	3.12	5	0.68

Analysis of Maximum Likelihood Estimates

Parameter	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-2.10	1.03	4.20	0.04
Gender	1	0.38	0.43	0.78	0.38
Edu	1	0.24	0.37	0.40	0.52
Mentor	1	0.50	0.47	1.14	0.29
Ext PD	1	0.11	0.22	0.26	0.61
Int PD	1	-0.12	0.35	0.12	0.73

Table 10 indicates that the independent variables do not have significant predictive value. The proposed predictor variables contribute no more than chance to the explanation of the dependent variable of promotion. The log likelihood statistic of 140.78 indicates that this model does not do a good job of explaining the data. The non-significant likelihood ratio chi-square value of 3.12 indicates the individual independent variables were not useful in predicting promotion. None of the variables of interest (gender β of .38, p=.38; education β of .24, p=.52; mentor β of .50, p=.29; external professional development β of .11, p=.61; and internal professional development β of -.12, p=.73) were significant at the .05 level in predicting whether an administrator had been promoted during the previous two years.

Research Question 4

Barriers to Career Advancement

Administrators were asked about 14 potential barriers to career advancement. The barriers and the corresponding percentage of administrators who agreed or strongly agreed with the statements are listed in Table 11. Lack of opportunities at current institution, an unwillingness to move or relocate, and the nature of the institution/leadership/politics were the top barriers to career advancement reported by administrators.

Table 11

Barriers to Career Advancement

Barriers	Overall % of administrators agreeing[a] that item was a barrier to their career advancement
Lack of opportunity at current institution	28.9%
Unwillingness to move or relocate	28.1%
Nature of the institution/leadership/politics	23.7%
Limited time for professional development	17.0%
Lack of appropriate degree or educational credential	16.3%
Limited organizational support for professional development activities	14.1%
Lack of mentoring/networking opportunities	14.1%
Gender	11.1%
Other personal characteristic	8.1%
Lack of peer/colleague support	7.4%
Age	6.7%
Late entry into administration	5.2%
Lack of administrative experience	4.4%
Race/ethnicity	3.0%

a. Percentage includes those who indicated strongly agree or agree on the Likert scale.

Further examination by gender reveals that larger percentages of women, as compared to men, agreed or strongly agreed with many of the fourteen statements about barriers to their career advancement. For example, 35.8% of women administrators agreed or strongly agreed that the nature of the institution/leadership/politics served as a barrier to career advancement, while only 11.8% of men agreed or strongly agreed with that statement (chi-square=10.79, *df=1*, p=.001). Over 20% of women administrators agreed or strongly agreed that lack of mentoring/networking opportunities served as a barrier to career advancement, as compared to 7.4% of men administrators (chi-square=5.12, *df=1*, p=.02). Over 13% of women administrators agreed or strongly agreed that lack of peer/colleague support served as a barrier to career advancement, while only 1.5% of men felt similarly (chi-square=7.04, *df=1*, p=.01). And 17.9% of women administrators agreed or strongly agreed that their gender served as a barrier to career advancement, in contrast to 4.4% of male administrators (chi-square=7.04, *df=1*, p=.01) (Table 12).

Table 12

Gender Differences in Barriers to Career Advancement

Barriers	% of men agreeing[a] (N=68)	% of women agreeing[a] (N=67)	Pearson chi-square value[b]	Prob. level
Lack of opportunity at current institution	25.0% (n=17)	32.8% (n=22)	1.01	p=.32
Unwillingness to move or relocate	27.9% (n=19)	28.4% (n=19)	0.00	p=.96
Nature of the institution/leadership/ politics	11.8% (n=8)	35.8% (n=24)	10.80	p=.00**
Limited time for professional development	16.2% (n=11)	17.9% (n=12)	0.07	p=.79
Lack of appropriate degree or educational credential	19.1% (n=13)	13.4% (n=9)	0.80	p=.37
Limited organizational support for professional development activities	16.2% (n=11)	11.9% (n=8)	0.50	p=.48
Lack of mentoring/networking opportunities	7.4% (n=5)	20.9% (n=14)	5.12	p=.02*
Gender[c]	4.4% (n=3)	17.9% (n=12)	6.23	p=.01*
Other personal characteristic[c]	5.9% (n=4)	10.4% (n=7)	0.94	p=.37
Lack of peer/colleague support[c]	1.5% (n=1)	13.4% (n=9)	7.04	p=.01*
Age[c]	5.9% (n=4)	7.5% (n=5)	0.14	p=.74
Late entry into administration[c]	1.5% (n=1)	9.0% (n=6)	3.85	p=.06
Lack of administrative experience[c]	1.5% (n=1)	7.5% (n=5)	2.85	p=.12
Race/ethnicity[c]	2.9% (n=2)	3.0% (n=2)	0.00	p=1.00

* Significant at the .05 level

** Significant at the .001 level

a. Percentages include those who indicated strongly agree or agree on the Likert scale.

b. Chi-squares were calculated by creating two categories of administrators: those who indicated agree or strongly agree on the Likert scale versus those who indicated neutral, disagree, strongly disagree, or not applicable.

c. In instances where cell counts are less than 5, Fisher's Exact Test is reported.

Career Path Interruptions and Constraints

Administrators also indicated in yes or no questions whether their career paths had been interrupted by child-rearing/family responsibilities, constrained geographically by spouse/partner's employment, or interrupted by other factors. Approximately 21% of administrators overall (5.9% of men and 35.8% of women) indicated that their career paths had been interrupted by child-rearing or family responsibilities. Twenty-six percent of administrators overall (19.1% of men and 32.8% of women) indicated that their career path had been constrained geographically by their spouse/partner's employment, and 16% (10.3% of men and 20.9% of women) said that their career path had been interrupted or constrained by other factors. In all three of these instances, more women then men indicated that their career paths had been interrupted or constrained (Table 13).

Table 13

Gender Differences in Career Path Interruptions and Constraints

	% of men (N=68)	% of women (N=67)	Pearson chi-square value	Prob. Level
Career path interrupted by child-rearing/family responsibilities	5.9% (N=4)	35.8% (N=24)	18.40	p.=.00**
Career path constrained geographically by Spouse/partner's employment	19.1% (N=13)	32.8% (N=22)	3.31	p.=.07
Career path constrained or interrupted by other factors	10.3% (N=7)	20.9% (N=14)	2.89	p.=.09

** Significant at the .001 level

Rasch Scaling of Barriers

A Rasch model was used to scale the data related to barriers to career advancement. The modeling resulted in a linear measure for each individual administrator, which could then be analyzed to determine gender differences. Given the fit statistics discussed in chapter 3, the model was deemed acceptable for this study.

Gender Differences in Scaled Measure

Men administrators had a lower mean estimate than women administrators (-1.51 mean score for men versus -1.18 mean score for women), indicating that on average, men were less likely to endorse (disagree on the Likert scale) the items. A t-test revealed that this gender difference, however, was not statistically significant (t=-1.27, *df=133*, p=.21) (Table 14).

Table 14

Independent Samples t-test: Gender Differences

	N	Mean	Std. Deviation	Std. Error Mean
Men	68	-1.51	1.5	.18
Women	67	-1.18	1.5	.18

t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower Confidence Interval	Upper Confidence Interval
-1.27	133	.21	-.327	.26	-.81	.18

This chapter detailed the findings of the data analysis for each of the four research questions. Chapter five will provide a discussion of these findings, as well as summary sections related to implications, future research, and conclusions.

CHAPTER FIVE

DISCUSSION

Developing a new generation of leaders is imperative if community colleges are to be successful in an increasingly complex environment. Examining career advancement and the professional development activities of community college administrators is especially important and timely in light of the onset of retirements. The ongoing retirements of the two generations of administrators who founded community colleges have caused some (Gallego, 1998; Italia, 1998; Shults, 2001) to question where qualified leaders will come from in the years ahead. Atypical hires, as well as bringing in "new blood" may be necessary to fill the leadership gaps. New administrative offices and the reorganization of many community colleges have potentially created new opportunities for the exercise of leadership, but do the current circumstances create new opportunities for women administrators to advance in a sector that is often described as overly bureaucratic and dominated by male imagery (Amey & Twombly, 1992)? This question can only be answered definitively through continued study of access and promotion of women into senior leadership positions.

Review of Findings

Research Question 1: *Are women administrators concentrated in middle level administrative positions rather than senior level positions?*

Similar to previous research findings, this analysis revealed that women community college administrators who responded to the survey were disproportionately represented in middle level administrative positions, rather than senior level. Women

administrators were more likely than men administrators to be Directors or Coordinators rather than Presidents, Vice Presidents, or Deans. The representation of women in administrative positions, however, has increased significantly since the mid 1980's when Moore, et al., (1985) found, for example, that only 3.1% of community college presidents were women. As many scholars and researchers have noted though, the representation of women in top administrative positions is still not proportionate to their representation in the classroom, nor in the community college faculty ranks.

The purpose of this present study went beyond merely describing the participation rates of women in senior administrative positions in that it sought to determine differences in the professional development activities and human capital investments of men and women community college administrators, as well as predictors of career advancement and barriers to career advancement. The next sections will focus on each of these research questions independently and then will provide summary sections of implications, future research directions, and conclusions.

Research Question 2: *Do differences exist between the career-related activities and human capital investments of men and women community college administrators?*

This study provides valuable information about the activities of administrators that are often referred to in the literature as human capital investments. The analysis revealed few statistically significant differences between men and women administrators in terms of their educational level, external and internal professional development activities, and mentoring activities. Overall, the quantity and participation rates of men and women were similar. This finding, taken alone and focusing only on quantity rather

than quality of experiences, suggests that women respondents are making equal or similar investments in human capital as men administrators.

Educational Attainment

Some of the trends in the descriptive data do warrant attention and suggest possible differences in the activities and experiences of men and women administrators. Although not statistically significant, a lower percentage of women administrators (only 18.5%), as compared to men (30.9%), have doctoral degrees. Examination of job postings reveals that many senior administrative jobs require a doctorate. The criteria for selection of a chief academic officer, for example, generally include a doctoral degree (Walton & McDade, 2001). Others concur, that a doctorate is a prerequisite to advancement to many of the positions with the most power in academe (Quina, et al., 1998). Therefore, a large percentage of the women administrators in this study may be at a disadvantage when seeking to advance.

Professional Development Activities

Administrators in this study participated in a variety of professional development activities both off- and on-campus. A majority of men and women administrators had served on state or regional boards of professional organizations, as well as having made presentations at national, state, or regional conferences. These findings indicate that administrators in this sample are cultivating important professional networks outside of their institutions.

Women respondents, however, had very low participation rates in the more selective or exclusive professional development activities, such as the American Council on Education Fellowship, the W.K. Kellogg Leadership Program, and the League for Innovation Leadership Program. In fact, none of the women respondents had participated in the American Council on Education Fellows program (as compared to three men); only one woman respondent had participated in the W.K. Kellogg Leadership Program (as compared to three men); and only three women had participated in the League for Innovation Leadership Program (as compared to six men). These findings suggest that there may be access issues associated with these particular programs. The more selective leadership programs may have certain requirements (e.g., that participants have an advanced degree or already be a college president) or these programs may require that participants be nominated to attend. Women administrators may be lacking the qualifications to participate in the selective programs, they may be unaware of the opportunity to participate, or they may fail to be nominated.

Further examination of what the American Council on Education (ACE) Fellows program entails may help to explain why women are less likely to participate in this or other similar types of programs. For the ACE program, administrators take a leave from their institution to intern with a senior administrator at another institution (Brown, Van Ummersen, & Phair, 2001a). While this program may provide an excellent leadership opportunity, it may be difficult to balance the demands of the program with other life circumstance and possible family responsibilities.

In terms of on-campus activities, a majority of administrators had participated in formal written performance reviews, staff development programs or courses, and special

institutional task forces, committees, and commissions. A large percentage of administrators (over 88%) also had the opportunity to take on additional responsibilities above their specific job description. Although little is known about the nature of these on-campus experiences, these findings suggest that the respondents are active participants on their campuses and are partaking in activities that help to shape the campus environment.

The few significant differences that do exist between the types of professional development activities of women and men are revealing. A majority of the women in the sample participated in specialized workshops or seminars for women, which suggests that these types of programming efforts may provide valuable forums and important networking opportunities for women administrators. Women administrators in this sample were also more likely than men administrators to participate in career reviews to plan ways to acquire additional skills, education, and training. This finding may be viewed as a positive result, however, little is known about the nature of career reviews – whether reviews are initiated by the administrator or mandated by a supervisor; whether reviews are formal with specified objectives/outcomes or more informal; and whether reviews are conducted on a regular basis or a one-time experience.

When examining the total number of professional development activities that administrators participate in, women did participate in similar numbers of external professional development activities. In terms of internal professional development activities, however, over 20% of women had participated in six or more internal professional development activities, as compared to only 7% of men. This finding may suggest that women administrators are 'doing more' to advance their careers and be active in shaping the campus environment, or it may be the case that women

administrators are over-extended in terms of on-campus service and commitments. Approximately one-third of women administrators, for example, indicated that they experienced a temporary task or job rotation (as compared to 19% of men), but again it is not clear whether this activity was a choice or mandated by a supervisor. Additional research is needed to examine the on-campus professional development activities in order to assess what impact these activities have on careers.

Mentoring

Higher percentages of women (62%), as compared to men (56%), indicated having a mentor in higher education – although this finding was also not statistically significant. Considering the concerns in the literature about the possible lack of mentors for women in senior administrative positions, this finding from the community college sector is encouraging. A majority of women in this study are finding mentors. As will be mentioned in the review of findings related to barriers to career advancement, however, a significantly higher percentage of women agreed or strongly agreed that lack of mentoring and networking opportunities had been a barrier to their career advancement.

Research Question 3: *Do differences in career-related activities and human capital investments help to explain career advancement among community college administrators? Is career advancement related to gender?*

Approximately 23% of administrators were promoted during the intervening years after completing the 2000 survey, and a slightly higher percentage of women administrators (25%), as compared to men (21%), had been promoted. Unfortunately, the

use of logistic regression did not help to further illuminate the relationship between gender, the human capital variables described above, and the outcome measure of career advancement. None of the proposed predictor variables (gender, educational level, numbers of external and internal professional development activities, or mentoring) helped to explain the outcome variable of promotion. Descriptive statistics indicated that slightly higher percentages of those who had been promoted had doctorates, had mentors, and had participated in slightly higher numbers of professional development activities. Although these percentages were not statistically significant, they warrant further investigation and may have been significant predictors had the sample of administrators been larger.

The findings related to research questions 2 and 3 neither clearly support, nor refute human capital theories. Statistically, men and women administrators in this sample made similar investments in human capital. While other researchers have found clear relationships between human capital variables and promotion, the findings here do not support the notion that promotion is related to one's human capital. One clear positive finding, though, is that promotion is not related to gender. Men and women administrators in this sample are equally likely to have advanced in their careers, which may be viewed as one indication of a gender equitable working environment.

The findings related to research questions 2 and 3 beg the question, though, of what does matter in promotion? While some variables, such as seniority and age, were not included in the equation, it was expected that educational level and investments in professional development would have relationships to promotion. And if these activities are not important considerations for promotion, what purposes do these activities serve in

the work lives of administrators? While more human capital variables could be added to the regression equation, there may be current job market features, other organizational characteristics, certain structures of opportunity, and individual preferences that were not captured in this study. The unanswered questions resulting from the logistic regression will be discussed as future research opportunities in the remaining sections.

Research Question 4: *What individual, organizational, and structural barriers exist that prevent administrators from advancing into senior leadership positions? Do gender differences exist in terms of barriers to career advancement?*

The findings on barriers to career advancement are revealing. The top barriers experienced by this group of administrators were the lack of opportunities at their current institutions, an unwillingness to move or relocate, and the nature of the institution including institutional leadership and politics. While these barriers were the top three for both men and women administrators, higher percentages of women administrators rated both the nature of the institution and the lack of opportunities at their current institutions as barriers to their career advancement.

A Rasch scaling model was employed to create an overall measure, based on the 14 Likert scale items, of barriers to career advancement for each individual administrator. While the data had reasonable fit to the model, the t-test did not reveal significant gender differences, although again, the measure indicated that women, on average, were more likely than men to experience barriers to career advancement and a larger sample may have revealed a significant gender difference. The negative mean measure for both men

and women administrators indicated that, in general, it was difficult for administrators to endorse (or strongly agree) with the items.

While the overall measure created by the Rasch model was not as useful for exposing gender differences, examination of the 14 individual barriers did reveal differences in the perceptions of men and women administrators. Higher percentages of women agreed that they had experienced 12 out of the 14 barriers listed on the survey. The two exceptions were items related to the lack of an appropriate degree and limited organizational support for professional development activities. With respect to these two barriers, higher percentages of men agreed that these had been barriers to their career advancement. This finding is somewhat contrary to the findings revealed in research question 2 – that higher percentages of men, as compared to women, had advanced degrees. It was expected that higher percentages of women would indicate that a lack of an appropriate degree had been a barrier, but women in this sample were less concerned about educational attainment being a barrier and were much more likely to indicate that other barriers were problematic.

Over 20% of women indicated that lack of mentoring and networking opportunities served as barriers to career advancement, and 13% of women indicated that a lack of peer/colleague support had served as a barrier. Another 18% of women indicated that their gender had served as a barrier to career advancement. These findings coupled with the fact that over one-third of women believed that the nature of the organization was a barrier to career advancement suggest that the current work environment may be a less than ideal place for a number of women in this study. And some administrators in this sample might agree with the sentiment expressed by Oakes

(1999) that "many female administrators continue to encounter resistance and friction in their daily professional activities" (p. 57).

It is important to note, however, that the percentages of women indicating that they had experienced barriers are relatively small. When Gillett-Karen (1997) asked administrators in North Carolina about obstacles to career development, over 50% of women respondents agreed that their gender was a barrier. A much higher percentage (60%) of women in the North Carolina community college system also agreed that the nature of the institution was an obstacle. These differences may suggest that Michigan administrators perceive fewer barriers or it may be the case that barriers have changed since the late 1990s.

Women administrators in the current study were also more likely than men administrators to indicate that their career paths had been interrupted by child-rearing/family responsibilities, constrained by their spouse/partner's employment, or constrained by other factors. This finding suggests that women administrators are balancing multiple roles while pursuing their administrative careers.

Overall, the findings related to barriers stand somewhat in contrast to the findings related to human capital and promotion. While women in this sample have similar participation rates in professional development activities and have been promoted at the same rates as men, women administrators still perceive barriers to their advancement – to a greater extent than their male counterparts. Although the percentages of women indicating barriers to their career advancement are relatively small, these perceived barriers may still help to explain why women remain underrepresented in the more senior levels of community college administration.

Limitations

Sample Size

The largest limitation is alluded to in the above review of the findings. The small sample size prohibited the discovery of many statistically significant differences between men and women administrators. While no firm conclusions can be drawn from the descriptive statistics alone, many of these statistics do reveal percentage differences between men and women administrators that are worthy of continued investigation. A larger sample that incorporates data from other states or from national samples might illuminate many of the trends seen here in the descriptive data.

Generalizability

This research is limited by the fact that it is only generalizable to the state of Michigan. The state of Michigan has a somewhat unique decentralized structure which makes these findings even less generalizable to states with very centralized governing systems. While additional data from other states might help to discern more gender differences, it might also gloss over some of the distinct characteristics of any given state system. The data as presented may in fact be very useful to state planners, state professional organizations, and institutional leaders within Michigan as they develop programming and review institutional policies. A larger national sample that masks state system differences might potentially be less useful for decision-makers.

Survey Questions

Even though the survey was pilot tested, after collecting the data it was clear that some of the survey questions were limiting and prohibited drawing additional conclusions. In terms of the professional development activities, the survey did not ask about the timing of these activities. Thus, it is not clear whether, for example, presidents are participating in these activities en route to the presidency or after they arrive at the presidency. While the data here provide valuable information about participation rates, little is known about the nature or quality of these activities and whether such activities are adequately meeting the career needs of administrators.

Another limitation with the survey questions was that the 2002 survey did not ask administrators whether they wanted to advance in their careers or whether they were actively seeking a promotion. The question was asked, however, on the 2000 survey in Phase I of this research and will be explored in future studies. Aspirations for promotion, which were left out of the current study, may be particularly important when trying to discern differences in career advancement. Walton and McDade (2001) for example, found that when asking chief academic officers about their aspirations, only 63% aspired to a presidency, while a large percentage preferred to stay in their current position. An assumption exists in this research, and in other research that looks at career advancement, that everyone aspires to promotion. This assumption may impact how research questions and studies are formulated.

Implications

Administrators rarely have the freedom to pick and appoint themselves to their positions (Brown, 2000), and success or lack of success in an administrative position can

be affected by factors beyond one's control. Administrators do make choices though, that are thought to aid them in advancing in their careers such as attaining appropriate educational credentials, skills, knowledge, and training. Although one focus of this study was on individual activities of administrators, the discussion and findings related to professional development, promotion, and barriers to career advancement have implications not only for administrators but also for the institutions and organizations that employ and support them. Administrative positions are both shaped by and dependent on the institution in which they are found (Brown, 2000), and leadership development should be an institutional concern, not simply a personal one (Green, 1988). This institutional concern may be augmented by the current higher education environment and the pending 'leadership crisis' facing community colleges. Career and leadership development, therefore, should be viewed as an individual and institutional cooperative endeavor with benefits for all involved.

Institutional Implications

While this study did not find evidence that women administrators were given less opportunities to participate in career-related activities, nor were they less likely to be promoted, the findings related to career barriers suggest that community colleges should examine the current working environment for all administrators with special attention to the barriers and work lives of women. An institution's treatment of women is an important indicator of its health and vitality (Brown, et al., 2001a) and thus warrants attention from institutional leaders and policy-makers.

In order to understand their role in developing leaders, institutional leaders and decision-makers should review existing policies and practices that may either help or hinder women. The Office of Women in Higher Education, in a 2001 publication entitled *Breaking the Barriers*, suggests an institutional assessment or audit whereby leadership development, career advancement, campus climate, and mentoring programs are studied. The audit is guided by such questions as: Is financial support available for women to take advantage of professional development activities? What support mechanisms are available for administrators to further their education and complete an advanced degree? Are some professional opportunities limited to only a select group of administrators? How do women find out about such opportunities – is it via an informal network that may not be accessible to women? And what policies may be covertly sustaining a 'good old boys' network or perpetuating the 'glass ceiling' phenomenon? Efforts to answer these questions would reveal formal or informal polices and practices that create barriers to career advancement.

In this same vein, institutions should prepare an annual status report on women that includes efforts to attract and support women leaders (Shavlik & Touchton, 1988). Such a report could contain both quantitative and qualitative measures, or what Brown, et al., (2001b) refer to as explicit and implicit indicators related to women's experiences on campus. Explicit indicators could document and quantify human capital investments (e.g., degree attainment), as well as visible changes in structures, policies, and practices. Some examples would include changes in hiring or promotion policies, budget priorities that address resources for professional development, new structures possibly including centers for women or formal mentoring programs, and other efforts to increase women's

participation in leadership positions. Implicit indicators would include attitudinal and cultural evidence. Some examples of implicit indicators would include any changes in interactions among groups, changes in the institution's self-image such as new terminology on campus, or changes in the rationales behind particular policies or practices on campus (Brown, et al., 2001b).

In an institutional audit or status report, institutions may want to carefully assess and document professional development activities to ascertain what combinations of campus-based, state-wide, and national programs best fulfill the leadership development needs of administrators. An audit or annual report would also allow institutions to assess how they are identifying leaders on campus and what programming efforts they are taking to develop leadership skills. This collection of baseline data and then the monitoring of changes in that data should be part of an ongoing institutional self-evaluation, which would alert campus leaders to the need for programmatic changes (Brown, et al., 2001b). An institutional audit also allows institutions to compare themselves to highly successful institutions using set standards or benchmarks for comparison.

An institutional audit, however, can lead to misinterpretations of data and thus requires a wide variety of information and indicators, as well as the involvement of multiple constituencies. As Quina, et al., (1998) pointed out, institutional data are often presented as summaries across an institution. For example, many studies report only the numbers – such as large increases in the number of women faculty and administrators. And an example of a summary from this study would be: women administrators were as likely as men to be promoted in the previous two years. Such statements, taken alone or

out of context, can be misleading and should be used cautiously because they may not adequately describe institutional conditions (e.g., women remain in middle rather than senior level positions and are more likely to indicate facing barriers to career advancement). Therefore, qualitative data and more implicit measures, such as attitudinal measures and perceptions about barriers, are essential to understanding the processes behind the numbers. Such data would also expose more details about organizational culture.

Organizational Culture

Above and beyond a review of policies and practices, Bierema (1998) suggested that organizations need to systematically identify any barriers resulting from an organizational culture that does not support or reward women. More than one-third of women in this study agreed that the nature of the organization was a barrier to career advancement. This finding lends support to the claims that community colleges may have environments that are not conducive for women's leadership.

As noted in *Breaking the Barriers* (2001), professional development initiatives cannot succeed without corresponding efforts to ensure a positive and productive working environment. Therefore, simply examining or changing policies may do little to change a work environment that is negatively perceived. Attempts to look at career advancement objectively through numerical data and written policies may obscure or mask over some of the more subjective and political aspects of who advances. Examining working environments using discrete measures may not reveal whether a negatively

perceived environment is intentional or unintentional and whether it is limited to a department or pervasive throughout the organization.

By doing an audit and taking steps to address organizational culture, an institution might find that women feel undervalued or underinvolved in the life of the institution or disenfranchised from its decision-making processes (Brown, et al., 2001b). Or such an audit may find instead that women are over-extended when it comes to service on-campus and that these activities have little payoff in terms of career advancement. In summation, an examination of policies, practices, and culture can expose both the structures and institutional dynamics that support or curtail the advancement of women.

Nature of Administrative Work

Another important element to consider when examining leadership and professional development of administrators, as well as organizational culture is the nature of the work itself. Administrative work, particularly in the more senior positions, can be demanding, stressful, and result in few tangible rewards. The actual duties of the job may require administrators to work long hours, to juggle personal and professional obligations, and to make personal sacrifices. What is not captured by this study is that institutions may struggle to find people who are interested in leadership positions because of the unappealing aspects of the job. Career advancement, therefore, may be better explained by examining individual choices, aspirations, and motivation. This idea is discussed further in the section related to future research.

Implications for Individuals

Career advancement requires motivation, skills, ability, and experience – all of which can be conceived of as individual attributes. Women who aspire to advance into leadership positions should actively plan and develop multi-dimensional career paths that address specific goals and objectives (LeBlanc, 1993), as the lack of a clear career strategy was cited as a deterrent to career advancement (Wentling, 1996). Others (Aisenberg & Harrington, 1988) observed that women in academe think in terms of a job instead of a career strategy. While there is no evidence from this study to suggest that women administrators are not thinking in terms of career strategies (and in fact, women were more likely then men respondents to participate in career reviews at their institutions), career counseling and career reviews to develop a long-term perspective may be useful for all administrators.

While much change can and should occur on the organizational level, it is essential that individuals work to help create and sustain an equitable and supportive environment. Nidiffer and Bashaw (2001) posed the question: Do women have a particular obligation to create women-centered universities? Women at all levels of administration and across the campus do have an obligation and an important role to play. Individuals must recognize what factors can be controlled and take action to improve working conditions in the academy (Carli, 1998).

Women who have formal positional authority seem to have a large role to play in ensuring full access and equal opportunity. Nidiffer and Bashaw (2001), in tracing the historical roots of women in administrative positions, stated:

> ... women continue to lack full access and equality of opportunity. We must

> rely on today's leaders - those in positions who have considerable formal authority and the capacity to enact the vision .... today's senior administrators have the opportunity to exercise leadership in higher education in ways only dreamed about by the early [women] pioneers. (p.5)

Women who are currently community college leaders, as presidents, board members, or other top-ranking administrative positions, have the opportunity to help shape the organizational culture and create an inclusive environment for women administrators.

Historically, women have worked as change agents in the academy. Nidiffer and Bashaw (2001) learned that women presidents, deans, chief academic and student affairs officers, as well as others pursued activist strategies dedicated to deepening and broadening opportunities for women administrators, faculty, and students. Activist strategies included mentoring, encouraging involvement in professional organizations, and recognizing and promoting leadership skills among women. In addition to these activities, the authors highlight the perseverance of women leaders who were often willing to change course and to pursue diverse strategies to achieve their goals. They conclude that administrators wishing to be successful at change require a thoughtful understanding of their institutional culture.

The institutional culture of community colleges, though, is clearly an issue for some of the women respondents in this study who indicated that the nature of the institution was a barrier to their career success and that they lacked peer/colleague support. As Quina, et al., (1998) noted, "women who are repulsed by the current institutional politics, or who find the policies in conflict with the interests that are most important to them, are faced with a difficult dilemma" (p.225). One solution, according to

these authors, is to become adept at the "game" in order to secure a position or promotion, and then work from within to influence change and pursue more activist strategies. Indeed, Walton and McDade (2001) when detailing advice to aspiring leaders suggested that administrators acknowledge that "politics" need not be a dirty word. Institutional organizations and national networks can help aspiring leaders to overcome barriers, be aware of the politics, and play the "game" if necessary.

Unfortunately, some women may not even be aware of the politics or barriers. Even though women may frequently run into barriers in academe, they may not recognize the barriers or they may choose to ignore them. Discrimination can be subtle and not always easy to ascertain (Schneer & Reitman, 1994). Carli (1998) explained,

> Many women are unaware of the pervasiveness and subtlety of gender discrimination in the academy or how their experience compares with that of their male and female peers. Consequently, women who experience discrimination may not only fail to recognize it, but instead may assume that their experience is unique and attribute it to bad luck or to mistakes on their part. (p.279)

Such statements emphasize the need for activist strategies and supportive networks.

The evidence is overwhelming in the literature that significant sources of social support in the academy are networks and mentors. While institutional initiatives or formal structures are important in helping to foster these types of relationships, women administrators can play more direct roles. Because of the varied nature of mentoring relationships, formal or institutionally mandated programs are not necessarily required. Whereas some efforts, such as increasing funding for professional development, may take

extensive time to work through the institutional bureaucracy, mentoring, on the other hand, can begin today through the efforts of individuals.

Other individual obligations include keeping a constant watch over the distribution of resources, including opportunities for training and professional development. In addition, it is important to keep watch over the make-up of important committees or task forces both at the institutional, regional, and national level so that they are representative of all constituents.

Filling the Leadership Gap

Two of the top career advancement barriers reported by both men and women administrators in this study were lack of opportunities at their current institutions and an unwillingness to move or relocate. These two statements, taken together, suggest a potential problem associated with filling leadership gaps. Administrators may be unwilling to move to advance in their careers and yet they are frustrated at the lack of opportunities at their own institution. Unlike a study of four-year college administrators (Sagaria, 1988) that found higher education administrators to be highly mobile, changing positions every two years, and willing to move to advance their careers, this study found a large percentage (28%) of administrators agreeing that their unwillingness to move had served as a career barrier. This finding suggests that institutions may have to make considerable effort or be more creative in their efforts to attract qualified applicants from outside the organization, and individual administrators may need to be more flexible if they wish to advance.

These findings also suggest that community college administrators, as a group, may have strong desires to build their careers at one institution. If this is indeed the case, the need to examine institutional policies and practices related to leadership development takes on added emphasis and raises an important question: How do institutions create environments whereby administrators are able to grow, develop professionally, and build meaningful careers – while also being able to stay at one institution? Unfortunately, this study provides only a small set of data about the mobility of administrators and leaves many unanswered questions and areas for future research.

Future Research

The current study points to a variety of directions for future inquiry about how investments in human capital, including participation in professional development activities and attaining graduate degrees relate to career advancement. Some researchers (Warner & DeFleur 1993), for example, point out that the amount of education may not be the most relevant dimension, but rather the area of study. Future research could address the specific areas of educational training and look at the relationships between career advancement and area of study.

Additional analysis of the data from this research, as well as future studies should take into account the age, life stages, and family circumstances of administrators. As was mentioned previously, administrative jobs are demanding and may have unappealing or unrewarding aspects. The demands of the job may be particularly problematic for women and men who are raising families and balancing competing demands. Women in this study were more likely than men to indicate that their career

path had been interrupted by child-rearing and family responsibilities, and this finding warrants additional attention in future studies addressing career advancement.

Rather than quantify the professional development experiences, as was the case with this research, the nature and quality of professional development experiences, as well as the institutional context for partaking in these activities, are equally important as foci of additional research on community college administrators. A finding from this study that warrants additional research is the high participation rates in on-campus activities such as committees and task forces. Research on faculty careers (Konrad, 1991) reveals that women may decrease their chances for tenure by doing too much institutional service and women, more so than men, may be asked to serve on undesirable committees. Additional research on the quality and nature of the institutional activities described in this study may reveal that women administrator's experiences serving on committees or task forces may have positive consequences in terms of networking possibilities. Or such activities may provide little in the means of professional development or useful career-related experience. Currently, the quality and usefulness of these activities for administrators are unexplored topics.

Future research, that would require examination of institutional documents rather than additional data collection, could address organizational structures and the percentage of women occupying leadership positions in community colleges. These structures could then be discussed in relation to perceived barriers and answer the question of, does the percentage of women in senior leadership have any relation to barriers to career advancement? Interestingly in a study of faculty, Tolbert et al., (1995) found that as the proportion of women in a department increased, so did the likelihood of turnover, until

the number of women reached a certain proportion. As the percentage of women exceeded 40%, negative social dynamics were reduced and turnover rates decreased for both men and women which suggested an improved climate. No similar studies were found that described climate at community colleges in relation to the number of women in senior leadership positions.

The Rasch model developed during this research was used to describe gender differences in perceived barriers, but the resulting measures could also be used to look at other group differences. For example, by limiting the sample to one institution, the barrier measures developed here could be used to uncover commonalities in the experiences of administrators on that one campus. Such an analysis could expose the pervasiveness of a particular barrier or it could expose positive aspects of the campus environment as well.

Much of the evidence from research on faculty career suggests other possible opportunities for inquiry in administrative ranks. In addition to receiving fewer promotions and lower salaries as compared to men, Hensel (1991) found that women faculty took longer to attain promotions. Similar studies could be done that look at the timing of promotion that takes into account the interruptions and constraints to career advancement described in this research.

More investigation is needed into title changes and whether administrators are following expected career paths and patterns. As the literature revealed, women in academe are more likely to hold positions, such as registrar, librarian, or student affairs professional. These areas do not have the same upward career tracks as academic administration positions (Quina, et al., 1998). Therefore, the typical path to more senior level positions excludes the positions that women are more likely to occupy. While the

data collected during this study may reveal some trends, only 31 people were promoted. Therefore, a larger sample would be more beneficial when examining title changes.

Future research should also address mentoring among community college administrators. Denmark (1988) suggested that beginning professionals need both a supportive mentor to encourage career development, but more importantly a political mentor to teach them how to build their reputations and "toot their own horns." Merely indicating yes or no on a survey question about mentoring does little to explain the possible nuances of the mentoring relationships of the survey participants. Additional analysis of open-ended questions, along with follow-up interviews about mentoring would provide more useful data about mentoring in community college administration.

Peer relationships may be equally important as mentoring relationships and receive little attention in the literature on community college administration. Research on faculty peer groups and networks indicates that exclusion from professional networks can have lasting negative effects on women's careers (Aisenberg & Harrington, 1988). The finding from this study that over 13% of women felt that lack of colleague/peer support was a barrier to their career advancement requires additional research.

Like mentoring and peer networks, sponsorship for administrative positions requires additional investigation. A step beyond mentoring, sponsorship occurs when an influential person recommends or strongly advocates the selection of an individual for a position. Sagaria and Johnsrud (1992) found that over 70% of positions at the top levels of the administrative hierarchy at one four-year university were effectively closed to non-sponsored candidates, and perhaps there is a similar phenomenon in other sectors of higher education. Phase I of this research asked several questions that may lend insight

into sponsorship. For example, administrators were asked whether their mentor had helped them to attain their current position and they were also asked how they became a candidate for their current position and what the best resource was for finding out about their current position. Examining this data may be useful in light of the findings from this study.

The findings related to human capital investments and the lack of a relationship between these activities and promotion suggest a need to further explore McDade's (1997) hypothesis that those aspiring to senior leadership positions may actively construct administrative careers/experiences through the purposeful selection and timing of certain kinds of work and professional development opportunities. McDade referred to those who engage more deliberately in career decisions as "intentional administrators." Interviewing administrators and asking questions about meaningful professional development experiences, the role of education, critical people or events, and barriers to career advancement might be particularly revealing in terms of discussing administrator intentionality.

Qualitative research with administrators might address the following: What professional development experiences have proved to be most valuable? Did obtaining an advanced degree change your career? Was a career in administration something that you pursued? Who are the people who have taught you the most during your career? What factors do you perceive as limiting your advancement as an administrator? Is there something that your institution could be doing differently to help support you in terms of professional development? And what professional development steps or activities do you need to prepare for the next step in your career? These broad interview questions might

lead to an understanding of how community college administrators make career decisions.

Although the 2002 survey attempted to entail a comprehensive list of possible barriers to career advancement, several other barriers may exist and could be explored through qualitative means. Missing from the current research are specific questions related to attitudes and stereotypes; unfair hiring practices or promotion policies; and the availability, or lack there of, of needed information or clear job expectations. Open ended interview questions about barriers to career advancement may be more revealing than the findings from the survey questions in this research.

Because it went beyond the confines of this research, the finding that 5% of administrators in this study had title changes due to reorganization of community colleges was not explored in any detail. Jones and Komives (2001) pointed out that the current climate of restructuring holds the potential to eliminate or lessen opportunities for women and other underrepresented groups. The most affected by restructuring efforts that are aimed at improving efficiency and reducing redundancy, are those in less powerful positions. Therefore, more research on the effects of reorganization on the career paths and advancement of community college administrators are in order as well.

Conclusion

Women leaders have helped to shape community college environments both on the margins in positions that may be less central to the institution, and increasingly in more senior administrative positions. Women have worked to gain recognition, access, and visibility in the leadership ranks of higher education (Nidiffer & Bashaw, 2001). The

current leadership crisis facing community colleges may provide opportunities for women to advance and to play a significant role in shaping this sector during the 21st century. Developing a new generation of leaders at all administrative levels is imperative for community colleges to remain successful in an increasingly complex environment.

Researchers must continue to take snapshots and investigate the work lives of women at all levels of the organization. This research examined the career advancement and professional development of community college administrators, with particular attention to gender. This study found that although the number of women filling leadership positions in community colleges has increased since the 1980s, women still remain concentrated in middle level administration rather than senior level positions. This study found few significant gender differences in terms of human capital, professional development activities, and promotion. Men and women administrators in this sample were making similar investments in human capital and career-related activities. And for this group of administrators, these activities did not have a clear relationship to promotion.

This study also examined barriers to career advancement. Administrators reported that a lack of opportunities at their current institutions, an unwillingness to move or relocate, and the nature of the institution were the top barriers. These barriers have significant implications for institutions and suggest that institutions may want to examine their current policies and practices, as well as their institutional culture if they wish to support and encourage leadership development on their campuses.

The findings of this study resulted in many unanswered questions such as what individual and institutional variables, factors, or characteristics help to explain who is

promoted? What role does professional development play in the work lives of administrators? And what other factors, such as personal choices and/or labor market characteristics may be impacting administrative careers? In addition to these questions, areas for future and more in-depth research include the role of mentors and sponsors in community college administration; the relationships between titles, positions, career ladders, and organizational structures; and the nature of administrative work.

As long as women remain underrepresented in top leadership positions, it is imperative that we strive to understand the participation rates, experiences, and the possible barriers facing future women leaders. For as Deborah Stanley (as quoted in Brown, et al., 2001a, p.21) stated, "In the final result, helping to advance the careers of women faculty and staff... is one of the real blessings of being in a position to make a difference. Providing for a more representative membership across the university structure is a duty we owe to the future."

APPENDICES

Appendix A

2000 Survey Excerpts

Question 1: External professional activities often contribute to professional advancement as an administrator. Following is a list of activities other administrators have considered important. Using the scale identified below, read each item and circle the number that indicates whether you participated in each activity.

Did Not Participate = 0 Did Participate = 1

0	1	Paid external consultant
0	1	American Council on Education Fellowship/Internship
0	1	W.K. Kellogg Leadership Program Fellowship
0	1	League for Innovation Executive Leadership Program
0	1	Other administrative fellowship/internship
0	1	Higher Education Management Institute (e.g., Harvard, Bryn Mawr)
0	1	Serve on board of directors of state or regional professional organization
0	1	Serve on board of directors of national professional organization
0	1	Attend specialized professional workshops or seminars for women (e.g., AAWCC, NAWE, NASPA)
0	1	Attend specialized professional workshops or seminars for minorities
0	1	Publication of books, article, technical, curriculum materials
0	1	Presentations at national, state, or regional conferences

Question 2: Following is a list of internal professional development activities that higher education institutions may provide for administrators. Using the scale provided, please read each item and circle the number that indicates whether you participated in each activity.

Did Not Participate = 2 Did Participate = 1

0	1	Formal written performance review
0	1	Career review to plan ways to acquire additional skills, education, and training
0	1	Inservice staff development programs/courses
0	1	Temporary task or job rotation at a similar level
0	1	Participation in special institutional task forces, committees, and commissions
0	1	Opportunity to take on additional responsibilities over and above specific job description
0	1	Sabbatical or study leave

Question 3: The term mentor is often used to identify a long-term, professionally centered relationship between two individuals in which the more experienced individual, the mentor, guides, advises and assists in any number of ways the career of the less experiences protégé. According to this definition, do you feel you have had a mentor or mentors in your career in higher education administration?

0 – No 1 – Yes

Appendix B

2002 Survey

In the evolution of your administrative career, you may have encountered certain challenges or obstacles to career advancement and attaining your goals. With this in mind, please read the following statements and indicate your level of agreement using the following scale. Please make any comments about the statements in the space provided.

1 Strongly Disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree
N/A Not applicable

a. My lack of appropriate degrees or educational credentials has served as a barrier to my career advancement.

b. My unwillingness to move or relocate has served as a barrier to my career advancement.

c. Lack of opportunities at my current institution have served as a barrier to my career advancement.

d. My age has served as a barrier to my career advancement.

e. Limited time for professional development activities has served as a barrier to my career advancement.

f. Limited organizational/institutional support for professional development activities has served as a barrier to my career advancement.

g. My lack of administrative experience has served as a barrier to my career advancement.

h. The nature of this institution/leadership/politics has served as a barrier to my career advancement.

i. Lack of mentoring/networking opportunities have served as a barrier to my career advancement.

j. Lack of peer/colleague support has served as a barrier to my career advancement.

k. My gender has served as a barrier to my career advancement.

l. My late entry into administration has served as a barrier to my career advancement.

m. My race/ethnicity has served as a barrier to my career advancement.

n. Other personal characteristics have served as a barrier to my career advancement.

2. Has you career path been:

a. Interrupted by child-rearing/family responsibilities? Yes No

b. Constrained geographically by spouse/partner's employment? Yes No

c. Interrupted or constrained by other factors? Yes No

3. What is your full position title? _____

4. For how many years have you held the position listed in question 3? _____

5. What was your position/full title two years ago (Spring of 2000), if different from what is listed in Question 3? _____
If your job position/title has not changed since Spring 2000, skip Question 6.

6. A promotion is marked by increased responsibilities and a possible increase in salary. Is the job/title change reflected between questions 3 and 5 due to *(circle letter)*

a. a promotion in the *same* division/department at the **same community college**.
b. a promotion in the *same* division/department at a **different community college**.
c. a promotion in a *different* division/department at the **same community college**.
d. a promotion in a *different* division/department at a **different community college**.
e. re-organization of college/division where title changed, but did not constitute a promotion.
f. Other circumstances (such as moving from a two-year institution to a four-year institution, movement from the private sector, or a lateral move). Please explain.

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