ASSESSMENT OF UNIVERSITY EXPERIENCES AND MENTORING
PERCEPTIONS OF HEALTH EDUCATION
GRADUATE STUDENTS

———————————————

A DISSERTATION

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE

GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

COLLEGE OF HEALTH SCIENCES

BY

DON S. CIULLA, M.S.

———————————————

DENTON, TEXAS

DECEMBER 2000

TEXAS WOMAN'S UNIVERSITY
DENTON, TEXAS

_____October 31, 2000_____
Date

To: Dean of the Graduate Studies and Research

I am submitting herewith a dissertation written by Don S. Ciulla entitled "Assessment of College Experiences and Mentoring Perceptions of Health Education Graduate Students." I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Health Studies.

_____
Susan Ward, Major Professor

We have read this dissertation
And recommend its acceptance:

_____
_____
_____
Department Chair

Accepted
_____
Dean of the Graduate Studies and Research

DEDICATION

This dissertation is dedicated to my father who has been watching from above for the past 30 years. I remember his inevitable words that drove me all these years to a successful career, a supportive family, and a magnificent education.

"Here's to you, Dad"
Love & miss you always,
Don

ACKNOWLEDGEMENTS

ABSTRACT

ASSESSMENT OF UNIVERSITY EXPERIENCE AND MENTORING
PERCEPTIONS OF HEALTH EDUCATION GRADUATE STUDENTS

Don S. Ciulla
December 2000

The purpose of this study was to assess and compare university experiences and

mentoring perceptions of master's and doctoral students enrolled in health education

graduate programs. The sample used for this study was full and part-time enrolled

graduate students in health education programs (completed at least 12 hours of graduate

work) at three Texas universities, ages 20 – 55+ years old. The instruments used to

collect data for the study consisted of the College Student Experiences Questionnaire, a

nationally recognized questionnaire that has been administered in a large number of

colleges and universities throughout the United States, and the Perceptions of Mentoring

Questionnaire, developed by the researcher. These instruments were used to collect data

on Quality of Effort, College Environment, Estimate of Gains, and Mentoring

Perceptions of master's and doctoral students in health education programs. The

questionnaires were distributed via class instructors and participants completed the

questionnaires either in or outside of class. Participation was voluntary and anonymous.

A total of 72 completed questionnaires, 45 master's students (62%) and 27 doctoral

students (38%), were used for data analyses. The data was analyzed using descriptive

statistics, t-tests, and correlation analysis. The results of the study indicated no

statistically significant differences in Quality of Effort, College Environment, Estimate of Gains, and Mentoring Perceptions when comparing master's and doctoral students in health education programs. The study also showed that there were statistically significant relationships (mild and moderate positive and negative) between these same variables. These findings suggest mentoring could have a positive impact on both master's and doctoral health education students, in relation to their academic and professional development.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Graduate education may serve as both a training ground for leadership and a laboratory for innovation and inquisition. Society's needs for health professionals, teachers, social workers, researchers, professors, and a host of technical professionals are met by graduate education (Baird, 1993). Graduate education is also playing a larger role at most universities today for many reasons, including its impact on institutional budgets, enrollment, and administrative goals and objectives (Baird, 1993). With its contributions through research and evaluation projects, graduate education not only impacts academic institutions, but also society as a whole.

During the last 20 years, the average time for completion of education from the bachelor's to the doctorate degree has risen from 8.0 years to 10.5 years. There is also evidence that degree completion rates have dropped during this same period (Bowen & Rudenstine, 1992). Therefore, it is important for colleges and universities to study graduate education retention and completion rates. Understanding graduate students' perceptions and experiences during their college stay will help these institutions to plan, develop, and implement effective programs focusing on recruitment, retention, curriculum, and institutional attractiveness.

One other approach to understanding graduate student success and satisfaction is student mentoring. Mentoring has been defined as a process of instructing, counseling, and guiding an individual and facilitating his/her development (Blackwell, 1987). Mentors can provide professional, academic, and emotional support in a student's

1

academic and career development. A mentor relationship may strengthen the student's academic and professional confidence and leadership skills (Kovach, 1992). Although not all graduate students may require a mentor relationship for their academic or professional development, assessing graduate students' perceptions of mentoring would assist faculty and administrators in future program and curriculum development. Furthermore, the act of being mentored may be one of the key elements in the future success of graduate students and preparation for their outside career in education or business.

Health care and health education professionals' roles continue to change relative to resource requirements. There have been allied health professional shortages, and more importantly, an expansion of roles with the onset of managed care in the last 20 years. Health education professionals have also seen a major expansion of career opportunities. As roles and responsibilities of health educators continue to change, it is vital that the graduate programs that prepare health professionals also evolve to reflect the trends of the time.

Purpose of the Study

The purpose of this study was to assess and compare university experiences and mentoring perceptions of master's and doctoral students enrolled in health education graduate programs.

Hypotheses

The following null hypotheses were tested at the .05 level:

Ho1 – There are no significant differences in Quality of Effort scores between health education master's and doctoral students.

Ho2 – There are no significant differences in College Environment scores between health education master's and doctoral students.

Ho3 – There are no significant differences in Estimate of Gains scores between health education master's and doctoral students.

Ho4 – There are no significant differences in Mentoring perception scores between health education master's and doctoral students.

Ho5 – There are no significant differences in Quality of Effort, College Environment, Estimate of Gains, and Mentoring perceptions between master's and doctoral students.

Ho6 – There are no significant relationships among Quality of Effort, College Environment, Estimate of Gains, and Mentoring perception scores in College Experiences scores between health education master's and doctoral students scores.

Definition of Terms

1. College Experience. The total scores on the College Student Experiences Questionnaire (CSEQ), which include the Quality of Effort scores, College Environment scores, and the Estimate of Gains scores.

2. Estimate of Gains. A subscale of the College Student Experiences Questionnaire, which consisted of progress ratings toward important educational goals.

3. Graduate Student. An individual at one of the participating universities

who is an enrolled degree-seeking master's or doctoral student.

4. Health Education Program. A graduate program at one of the participating universities, which includes master's and doctoral curricula in health studies, health education, or health promotion.

5. Mentoring. A process of instructing, counseling, and guiding an individual and facilitating his/her development (Blackwell, 1987). Mentors provide professional, academic, and emotional support in a student's academic and career development.

6. Quality of Effort. A subscale of the CSEQ which provides an estimate of the personal efforts students make to further their own learning.

7. The College Environment. A subscale of the CSEQ containing 10 scales related to characteristics of college environments that encourage students to put forth effort in educationally purposeful activities.

Limitations

The limitations of this study were as follows:

1. A convenience sample was used due to limitations in funding and time.

2. Only enrolled degree-seeking master's and doctoral graduate students were surveyed.

Delimitations

The delimitations of this study were as follows:

1. Data collected from graduate students with less than 12 credit hours of course-work were not used because the student may not have had adequate graduate college experiences or opportunities for being mentored.

2. Only Texas universities with graduate programs in health education or health promotion were surveyed.

Assumptions

The assumptions in this study were as follows:

1. All graduate students in the sample answered questions honestly and to the best of their ability on the self-report questionnaire.

2. All graduate students in the sample are aware of their behaviors and attitudes toward their graduate school experiences, and have perceptions of mentoring.

Background and Significance

A number of studies have been conducted on graduate education, especially in the sciences, such as engineering and medicine (Bowen & Rudenstine, 1992). One of the major reasons for studying graduate programs is a concern for future staffing of colleges and universities (Bowen & Rudenstine, 1992). Other reasons for studying graduate education and specifically, gradate students, are for better understanding of their needs, enhancement of recruitment and retention, and improvement of curricula. In addition, the importance of developing and administering programs for the graduate student in

preparation for his/her career is a powerful reason to continually survey and study this population.

Earlier studies have examined many different factors, such as age, sex, undergraduate grade point average, intelligence scores, and grade point average in field-related content. According to Ng (1969), Weber, Brink, and Gilliland studied 319 graduate students at Northwestern University in 1942 and concluded that grade point average was strongly correlated with graduate success ($r = .86$). More recent studies have included some of these same factors, e.g., differences in age, sex, ethnicity, and class standing, measured students' perceptions (Junn & Fuller, 1996) A study by the University of Minnesota Committee on Educational Research reviewed 12,467 graduate students from various universities, classifying them into two groups. One group attended universities accredited by the American Association of Universities, while the other group attended universities who were not accredited. The results did not indicate that students from accredited schools were more successful (Ng, 1969).

Another important factor in measurement of graduate school success may be the act of mentoring. The term "mentoring" may be defined in various ways. Newby and Heide (1992) describe mentoring as "the use of an experienced individual to teach and train someone with less knowledge in a specific area" (p.2). The Dictionary of Occupational Titles classifies mentoring as a highly complex people-related skill, involving comprehensive concern for life-adjustment behavior (Carden, 1990). No matter which definition is used, the key in the mentoring relationship is that both parties positively gain from the experience. Moreover, "mentors are influential people who can

significantly help the protégé reach his/her major life goals"(Carruthers, 1993, p. 6). Thus, positive mentoring can greatly contribute to professional development.

Many studies have been conducted about the effects of mentoring in relationship to career development (Dreher & Ash, 1990; Newby & Heide, 1992; Cohen, 1999; Chao. Walz, & Gardner, 1992). In a study of 320 male and female business school graduates (Dreher &Ash, 1990), individuals experiencing extensive mentoring relationships reported receiving more promotions, higher incomes, and more satisfaction with their pay and benefit than those individuals less involved in mentoring relationships. Newby and Heide (1992) discussed the intrinsic and extrinsic rewards obtained by the mentors as reflected in the research literature. They state that although mentoring is important for the inexperienced individual, the mentor's benefits are of equal importance. They may receive extrinsic rewards, such as recognition and monetary compensation. From these rewards, an added motivation for mentoring can also be effectively increased trough intrinsic means. These intrinsic rewards may be feelings of confidence in one's own abilities and increased enjoyment of the mentoring task. Cohen (1999) outlined the benefits as well as a guide for both the mentor and protégé (mentee). H e provides the business manager with a pocket guide to effective mentoring. This guide contains applications and evaluative tools for the mentor. Chao, Walz, and Gardner (1992) found that formal mentors provide psychosocial support to the same extent as informal mentors. However, formal mentors do not provide as much career-related support. A number of health-related careers use mentoring programs, such as nursing, health care

administration, and occupational and physical therapy use. Further study is needed to understand the effects of mentoring as related to graduate school success.

CHAPTER II

REVIEW OF LITERATURE

Graduate education is a major part of American higher education, with more than 1.5 million students enrolled in graduate programs (Baird, 1993). Graduate students represent nearly one out of every four students attending universities or comprehensive institutions (Baird, 1993). Although graduate education is essential to university growth and development, there is a surprising lack of research in the area of graduate retention and attrition. As with any program, it is vital for administrators to understand the needs of their "clientele" (Bowen & Rudenstine, 1992). Therefore, it is essential for university leaders and faculty to understand those factors that promote degree completion at the master's and doctoral levels. This chapter will describe graduate student characteristics, previously identified success factors, and methods for researching success factors. As mentoring has received little study as a component of graduate student success, separate consideration will be given to the role it plays in graduate outcomes.

Graduate Student Characteristics

The characteristics of graduate students differ from undergraduate students in many respects. A Graduate School Institutions (CGSI) survey conducted in 1991 showed that there were 1,016,484 total graduate students in the CGSI member universities. Fifty-one percent were part-time and 49% full-time students. This study also revealed that 51% of the graduate students surveyed were women.

Age, education, and life experience are factors that distinguish graduate students from undergraduates. Graduate students are older, are more familiar with higher

9

education, more experienced workers, and have many family, social, and adult responsibilities that may affect their education (Baird, 1993). Due to their previous undergraduate college experience, graduate students are familiar with the college or university's requirements and their own personal study disciplines. For example, knowledge of reviewing articles and preparing term papers may be non-threatening to the graduate student as compared to an undergraduate student. Typically, graduate education is less structured and more individualized than undergraduate education. (Baird, 1993; Isaac, 1993).

In addition, graduate students typically work full- or part-time and commute, which is different from the mainstream full-time on-campus undergraduate student. Research has shown that working and commuting may divert student effort from academic involvement and may tend to be related to higher rates of graduate school withdrawal (Astin, 1984).

Social support is an important factor in graduate education. Three sources of social support for graduate students are their families, their peers, and faculty in their academic departments (Mallinckrodt & Leong, 1992). In a study of psychology graduate students, social support from peers and faculty were directly related to lower levels of stressful life events, as well as lower levels of physical and psychological stress symptoms (Goplerud, 1980).

In summary, graduate students are typically classified as adult learners, and in 1993 made up approximately 50% of higher education enrollments (MacKinnon-Slaney, 1994). As indicated by research, there are significant differences between graduate and

undergraduate students (Bowen & Rudentstein, 1992; MacKinnon-Slaney, 1994).

However, there is a lack of empirical research that explores differences between master's

and doctoral students (Bowen & Rudenstein, 1992). As graduate enrollment increases

nationwide and completion rates decline, the need for college and university

administrators to assess differences, needs, attitudes, and behaviors among graduate

students is monumental.

Success Factors

In order to measure graduate "success," one must delineate influential factors that

are measurable. Performance in undergraduate programs of study, combined with

Graduate Management Aptitude Test (GMAT) or the Graduate Record Exam (GRE), are

two criteria used for determining admission to graduate school (Paolillo, 1982;

Youngblood & Martin, 1992).

Another factor related to graduate school success factors is the college

environment. According to Cambiano, Denny, & DeVore (2000), the college

environment can influence the persistence and participation of students. College

administrators and educators have little control over the student's personal circumstances;

however, they can influence students through classes, student activities, and campus

activities (Cambiano, Denny, & DeVore, 2000). For example, colleges and universities

may offer classes on time management, stress management, and study skills. In addition,

the faculty can assist students with developing their academic and career goals (Kerka,

1989).

Kalsner (1991) presents four recurring themes in student non-success: (1) unclear expectations from the college or university; (2) non-adjustment, both personal and the environmental; (3) financial constraints; and (4) academic "under preparation." She found that students usually leave college voluntarily, not as a result of poor academic performance. Kalsner also concluded that the students who remained in college had lower grade point averages than the students who withdrew. As Penn (1999) summated, institutional administrators need to focus on the use of enrollment management tools, outcomes-based research on retention, and evaluation of students' satisfaction in order to meet the needs of graduate students (Penn, 1999).

In addition, research has documented the importance of the college environment in attaining the institutional educational purposes, in encouraging desired behavior, and in fostering relationships among students that are supportive of those purposes and behavior (CSEQ, 1999). In a study of college students' ($n = 1184$) usage and satisfaction of 26 non-instructional university campus services, Junn and Fuller (1996) found that females and white students rated services more favorably than male and non-white students. Also, there were significant differences in the ratings of satisfaction between ethnic groups. In every case of a significant ethnic difference, white students rated campus services more favorably than non-white students. The results of Junn and Fuller's (1996) study provide a platform on ways colleges and universities might develop student services that embrace diversity on the college campus and improve the overall university environment.

Even though most campus administrators are concerned with campus climate, many may not conduct surveys on a regular basis. Periodic and regularly scheduled surveys would be particularly important for identifying strengths and weaknesses of specific services (Junn & Fuller, 1996). The results of these surveys might support specific services or offices on campus to make institutional policy recommendations, support resource allocation, and modify or change programs.

Measurement of Graduate Student Satisfaction

College or university administrators measure satisfaction of graduate students by external and internal processes. One of the major external processes used to measure college or university satisfaction is the College Student Experiences Questionnaire (CSEQ), developed and distributed by the Center for Postsecondary Research & Planning at Indiana University (CSEQ, 1999). The survey samples include over 80 major colleges and universities. The CSEQ measures graduate students' satisfaction and success by exploring their attitudes about the college environment, factors in obtaining goals and objectives of the individual and the institution, and social support.

The content of the CSEQ is very specific, which allows faculty and administrators to easily see where local modifications and changes could stimulate more student effort, leading to a greater educational progress. Universities have found the CSEQ a valuable tool in the self-study phase of an accreditation as well as valuable information in their assessment program (CSEQ, 1999). In addition to providing valuable information to the institution, the CSEQ may encourage a student to engage in reflection and self-evaluation.

The other way colleges and universities measure satisfaction is by the internal method, which includes developing their own instrument and comparing it to results of previous surveys. The University of Wisconsin uses this method. The advantage of this method is that the college or university can tailor questions to focus in a specific area. The results of a satisfaction survey conducted externally or internally can be quite revealing. The university or student learns which items should be at the top of the institution's retention agenda or the student's personal agenda. In addition, the use of this these types of surveys give the college or university a blueprint to improve retention for the university and improve the students' satisfaction (Noel-Levitz, 1999).

Research on Graduate Education

Attrition and retention information is notably absent from reports regarding graduate education. Bowen and Rudenstine (1992) note that in their comprehensive study of six fields at 10 major research universities that "surprisingly little has been written about the general pattern of completion rates" (p. 5). The literature indicates that although there is a great degree of information on undergraduate retention and attrition, there is little information about graduate retention (Bowen & Rudenstine, 1992). Retention is increasingly important in order to gauge the success rates of graduate programs.

Moreover, while research on graduate education tends to focus on retention and attrition, there is still a dearth of information about graduate education, especially in health education. Future research on this topic would be valuable to both graduate students and academic institutions involved in this area. The health education graduate

student would gain information that may lead to his/her personal growth and career development. Likewise, future research may serve as a guide for academic administrators to improve program implementation and evaluation, thus leading to better retention and increased enrollments.

Mentoring

The mentoring concept emerged from Greek mythology. Before leaving for the Trojan wars, Odysseus, King of Ithaca, charged his friend Mentor to prepare Telemachus, his beloved son, to ascend the throne. Mentor's influence over Telemachus was such that Athena, Zeus's daughter and goddess of wisdom, found it useful to appear in his form to assist the boy at critical points (Kridel, Bullough, & Shaker, 1996). This story demonstrates how the act of teaching and kinship helped sustain Greek civilization. Throughout time, humans have continued survival through learning, skills, culture. and values directly from other humans whom they admire (Murray & Owen, 1991). As Odysseus trusted his son with a wise elder, people today have also recognized the value of seeking counsel from seasoned "educators" in the pursuit of their own goals (Healy & Welchert, 1990).

There are endless mentoring stories that evidence the positive effects of a mentor-protege relationship (Kridel, Bullough, & Shaker, 1996). One example of a powerful mentoring relationship is depicted in the book, Tuesdays with Morrie (1997), written by the protégé, Mitch Albom, about his mentor, Morrie Schwart. While supporting him in co-authoring his dying professor's "final thesis," Mitch discovers the greatest of life's lessons. The book illuminates the merits of mentoring. Albom (1997) writes:

Have you ever really had a teacher? One who saw you as a raw but precious thing? A jewel that could be polished to a proud shine? If you are lucky enough to find your way to such teachers, you will always find your way back. Sometimes it is only in your head. Sometimes it is right alongside their beds, (p.192).

Morrie shares his own wisdom about mentoring relationships when his says to Mitch, "There is no formula to relationships. They have to be negotiated in loving ways, with room for both parties, what they want and what they need, what they can do and what their life is like" (Albom, 1997, p.178). Both Mitch and Morrie's lives are greatly enhanced through the kinship they share, both professionally and personally. Albom's book serves as a powerful testament of the benefits of mentoring relationships.

Definitions of Mentoring

Despite the long existence of mentoring, literature-based definitions of the term vary widely. Newby and Heide (1992) simply define mentoring as " the use of an experienced individual to teach and train someone with less knowledge in a specific area" (p. 2). A more complex definition by Healy and Welchart (1990) is that "mentoring is a dynamic, reciprocal relationship in a work environment between an advanced career incumbent (mentor) and a beginner (protégé) aimed at promoting the career development of both" (p. 17). The Dictionary of Occupational Titles classifies mentoring as "a highly complex people-related skill, involving comprehensive concern for life-adjustment behavior" (Carden, 1990, p.276). Whatever the definition, the key in the mentoring relationship is that both parties positively gain from the experience. Moreover, "mentors are influential people who significantly help you reach your major life goals"

(Carruthers, 1993, p. 11). Thus, positive mentoring can greatly contribute to personal, academic, and professional achievement.

Formal and Informal Mentoring

There are two types of mentoring, namely, formal and informal (Brey & Ogletree, 1999). Formal mentoring programs or relationships are those usually structured and initiated by an organization. Normally, these organizations have made a strong commitment to the growth of the individual by placing a high value on training and professional development (Caravalho & Maus, 1996). Chao, Walz, and Gardner (1992) found that formal mentors provide psychosocial support to the same extent as informal mentors. However, formal mentors did not provide as much career-related support. Traditionally, educational institutions and business organizations have offered formal and informal mentoring programs. Formal mentoring examples are: the U.S. General Accounting Office's Executive Candidate Development Program; the Tumor Registrar's Association of California's Mentoring Program; and the Trinity College Mentoring Program (Murray& Owen, 1991). These formal mentoring programs are widely administered by a program coordinator, and entail required meetings/workshops for the mentor and protégé

Big Brothers/Big Sisters is a great example of the positive effect of a formal mentoring program. The program boasts 75,000 children from single-parent homes ("Littles") with volunteer mentors ("Bigs") through more than 500 chapters nationwide (Walker & Freedman, 1996). Many other organizations (National Academy Press, 1997) have developed mentoring guides for industry and educational institutions. The activities

17

encouraged by the program are primarily informal, and the average amount of time spent between the mentors ("Bigs") and children ("Littles") is 126 hours per year or about three 40-hour work weeks (Walker & Freeman, 1996).

Informal mentoring relationships are not structured or managed and are usually not officially recognized by the organization. These relationships are normally spontaneous and occur without external organizational involvement (Chao, Walz, & Gardner, 1992). Informal mentoring relationships can exist within a formalized, structured mentoring program. One such example of an informal mentoring relationship existing within a formal mentoring structure is at Oklahoma University's College of Public Health Alumni Association and the Dean's office. The graduate students are assigned alumni of the college in their particular field of interest to serve as mentors. This program has documented that mentoring between alumni and graduate students has resulted in internship opportunities, job referrals, personal resources, and overall support. Another example is the Texas Woman's University's Graduate Alliance Peer Support (GAPS) program. The Health Studies Department at TWU sponsors this program. A teaching assistant in the department designed the program to assist and guide the new graduate student. In this program, the mentor (teaching assistant and/or senior graduate student) assists the protégé (in-coming graduate student) in adjusting to the college environment, the departmental policies and requirements, and the personal rigors of graduate school. The program coordinator oversees mentoring assignments and issues. The program is still in its pilot stages, and therefore no summative data are available on the effects of this program. However, GAPS is one of the only informal mentoring

programs existing in a graduate program of health education and may serve as a template for future programs in the field.

Student-Faculty Relationships

An important aspect of mentoring is the relationship between students and faculty. These associations may extend beyond formal interaction because the value of college transcends the transmission of factual material in the classroom (Lamport, 1993). As Lamport (1993) observed, "questions on student-faculty informal interactions are moving from *what happens* to *how* and *why*, and from the *amount* of interaction to the *quality* of student-faculty relationships" (p.989).

In addition, Cohen (1999) outlined the "essentials" for effective partnerships between mentors and protégés. These attributes are explained in the form of six behavioral dimensions:

1. Relationship Dimension – essential behaviors are sharing/reflection, empathetic listening, and understanding/acceptance.

2. Informative Dimension – essential behaviors include learning facts about career/education/plans/ progress, commenting on use of information, and providing tailored/accurate/sufficient knowledge.

3. Facilitative Dimension – essential behaviors include exploring interests/abilities/ideas/beliefs, revealing other views/attainable objectives, and discussing own decisions about career/training/education.

4. Confrontive Dimension – essential behaviors include respect, decisions, actions, career, insight, and evaluation.

5. Mentor Model Dimension – essential behaviors include disclosing life experiences as a role model, personalizing/enriching the relationship, and taking risks/overcoming difficulties.

6. Employee Vision Dimension – essential behaviors include thinking critically about career future, realizing personal/professional potential, and initiating change/negotiating transitions.

Mentoring Models

Unlike many planning models used in business, which are often clear and sequential, existing planning models for mentoring programs are less concise. The problem lies in the ambiguity of outcome objectives. Business objectives are usually product-oriented. The objectives in an educational institution may not be as clear. The graduate student may be searching for career development in business or be pursuing a career development in educational teaching or research. He or she may be unsure how to develop a plan of action to follow while completing educational requirements because future professional success often weighs heavily on the mind of a graduate student. For this reason, a model is needed for higher education programs that marry the classroom with the "Real World." University mentors could work with business professionals and combine mentoring efforts in a formal or informal manner in order to give the graduate students a preliminary view of the business opportunities.

Similarly, Oramaner (1981) asserts that faculty who are willing to extend interactions beyond the classroom have the potential for having a positive impact on the graduate student's life, and vice versa. Many faculty members desire and enjoy the

interaction with students; however, most are not fully aware of the value of this informal interaction (Johnson & DeFreece, 1984). In an extensive literature review completed by Lamport (1993), the author concluded that many studies have supported the notion that the faculty member is a socializing agent in the college or university experience. Faculty can aid in academic achievement, college satisfaction, intellectual development, and personal development (Lamport, 1993). Furthermore, Lamport (1993) also found that faculty interpersonal characteristics and classroom atmosphere are significant factors in student-faculty relationships.

Mentoring and Career Development

In the 1970s, many corporations and governmental agencies started mentoring programs. In the 1980s, colleges, universities, states, and school districts emulated the movement. Mentoring partnerships were developed to enhance the quality of faculty and administrators in education and business (Healy & Welchert, 1990). Many studies have reported the positive effects of mentoring in relationship to career development. Dreher and Ash (1990) found in a study of 320 male and female business school graduates that individuals experiencing extensive mentoring relationships reported receiving more promotions, higher incomes, and more satisfaction with their pay and benefits than those individuals less involved in mentoring relationships. Newby and Heide (1992) discussed the intrinsic and extrinsic rewards obtained by the mentors as described in the research literature. Extrinsic rewards included monetary compensation, job improvement, and knowledge acquisition, and the mentoring relationships benefit the mentor, the protégé and the organization. Intrinsic rewards found in the literature review included personal

fulfillment and community involvement. Newby and Heide (1992) discussed other intrinsic factors generalized by Keller (1987), Lepper (1988), and Newby (1989), which included curiosity, cooperation, challenge, competence, and confidence.

Mentoring and The Internet

Mentoring has now taken on a new format, the Internet. The use of this medium is clearly informal, but may provide benefits to the busy graduate student. MentorNet is an online Internet site, is the home of The National Electronic Industrial Mentoring Network for women in engineering and Sciences (MentorNet, 1999). According to MentorNet, women students gain additional information, encouragement, advice, insight, and a sense of professional community. The mentors, in this program, benefit from the satisfaction of guiding future professionals. Universities benefit from a program that encourages retention in scientific and technical fields, and corporation's benefit through the matching of students with industrial mentors, preparing students for prospective employment.

Mentoring in the health field was studied by the Public Health Student Caucus (PHSC) of the American Public Health Association (Mahayonand & Stigler, 1999) via the computer and the Internet. In this nine-month study, the Public Health Student-Mentor Program, 104 public health professionals were matched with graduate-level students in health-related majors who shared similar career interests (Mahayonand & Stigler, 1999). Participants were from 11 public health settings in 33 states, and represented 28 health-related fields. Participant matching was prioritized by (1) field of study, (2) geographic location, (3) public health setting, (4) race/ethnicity, (5) gender, and

(6) other criteria of a personal interest. Based on a 68% response rate, the study indicated that email was the most frequent mode of communication (51%). Thirty-nine percent of the participants reported that the mentoring strengthened their interest in their chosen career field, 36% believed that their personal growth had been facilitated, and 24% stated they had developed new skills. This study suggests that positive mentor-student relationships may also serve to promote future mentoring. Mahayosnand and Stigler (1999) found that "strategies to incorporate more formal and informal public health mentoring programs may help strengthen the public health field through the growth and retention of strong and committed leaders" (p. 2).

Other online mentoring sites include the Peer Education Program, sponsored by the Counseling Service at Simon Fraser University, which offers counseling services by "students helping students" (PEP Program, 2000). Another site is the University of Wisconsin at Milwaukee's Peer Mentoring program, which is operated as part of the College of Letters and Science (Peer Mentoring, 2000). The Internet may provide graduate students with an additional tool that can be accessed during their own time frame, and at multiple locations (e.g., school, business, and home).

Mentoring in the Health Sciences

The need for mentoring in the field of health education is gaining more recognition. For example, Lindsay, Hanks, Neiger, & Barnes (2000) examined skills and characteristics of entry-level community health educators, and found that these students entering the work force today need a wide variety of skills. Results from this study also showed that counsel by faculty advisors closely followed the current needs of local and

state community health agencies. In short, faculty were instrumental in the student's future professional development.

Mentoring is also used in other facets of the health sciences. Nurses or other ancillary patient care personnel typically use mentoring as a way of training the new practitioner and providing an orientation to the specific area of practice. These personnel are formally scored and evaluated for accreditation and competency basis, such as the Joint Commission on Accreditation of Health Organizations, a voluntary organization that provide accreditation to hospitals, nursing homes, home health agencies, and other health providers (JCAHO, 1999). The mentor must "sign off" as verifying competency of the individual.

These mentoring relationships may have both positive and negative implications or consequences. Positive implications include a dynamic reciprocal relationship between the graduate student and faculty member that consists of mutual respect and a sense of congenial responsibility (Brey & Ogletree, 1999). Other positive implications are an increase of motivation in both the protégé and mentor, and decrease of attrition or faculty turnover (Murray & Owen, 1991). Negative implications include departmental politics, which may arise from conflicts between the student and faculty member (Brey & Ogletree, 1999), and favoritism by the administration (Murray, 1991). Other negative consequences included jealous co-workers or students and graduate students or faculty who are unrealistic in expectations (Murray & Owen, 1991).

Conclusion

In summary, mentoring in academia merges textbook with reality in providing graduates students with opportunities to "look and see what it's like out there." This can only strengthen students' future interests and development. Other positive outcomes include knowledge, experience, potential future contacts, and kinship. The competition in the workforce after graduation is fierce, and these outcomes can lead to better opportunities for employment and greater self-confidence. In addition, the effect of faculty development on the well being of graduate students has been well documented (Halleck, 1976). Social support from the mentoring relationships may often address personal as well as academic concerns (Brown & Barnett, 1984). In general, studies on mentoring relationships are vast; however, there is a lack of empirical research, which explores the effects of mentoring in the field of health education. Future research should investigate the link between mentoring and program attrition, professional practice, completion of professional certification, and personal fulfillment.

At the graduate level, the superiority of U.S. programs of study, viewed in both quality and scale, is widely accepted, and perhaps taken for granted (Bowen & Rudenstein, 1992) Still, with all of its accomplishments, the state of graduate education in the United States is far from utopian. According to authors Bowen and Rudenstein (1992), there has been little systematic study has been devoted to doctoral education in general, although there are a number of good studies of certain aspects of graduate education. Research involving graduate education in the health sciences has been particularly limited. Both the vital importance and substantial cost of graduate education

would seem to warrant that it be given more attention. Considerable speculation exists about the reasons for the shortage of scholarly interest in graduate education. Possible explanations include a general tendency for researchers to prefer to study other areas, as well as the threatening conceptual and empirical problems that often trouble those who research graduate education (Bowen & Rudenstein, 1992). Furthermore, as Bowen and Rudenstein (1992) eloquently explain:

> The specialized nature of fields of knowledge at the graduate level makes it unusually difficult to generalize, and the decentralized administration of graduate programs means that the problems of collecting even the simplest data can be monumental. One clinical psychologist has suggested that the traumas associated with pursuit of the PhD may even have discouraged many scholars from returning to such a personally painful subject! (p. 2).

Nonetheless, the potential rewards of partaking in such research are great. In many situations, research and evaluation in higher education, along with a combination of increased external support and strong internal efforts, could largely increase the number of master's and doctoral degrees conferred in the United States (Bowen & Rudenstein, 1992). This increase not only benefits the larger society, but the university and individual departments as well. In addition, researching graduate students' perceptions, performance, and behaviors could have other positive effects, including making graduate study more attractive to the most able undergraduates and more satisfying to the candidate pursing the Ph.D. As Bowen and Rudenstein surmise in their book, Pursuing the PhD (1993):

> While the lot of many graduate students will never be an entirely cheerful one, paths can be provided and many irritants can be removed. Travails notwithstanding, graduate education can be enormously rewarding to students as well as of great value to the society. (p.289)

CHAPTER III

METHODOLOGY

The purpose of this cross-sectional descriptive study was to assess and compare university experiences and mentoring perceptions of enrolled health education master's and doctoral students in the state of Texas. Descriptions of the sample, sampling procedures, instrumentation, treatment of data, and statistical methods are detailed in this chapter.

Study Sample

The study sample was composed of 135 master's and doctoral students enrolled in health education graduate programs at three Texas universities. For this study, to maintain anonymity of the universities, they were identified as University Group A, University Group B, and University Group C. All three universities are accredited co-educational institutions with well-established graduate programs in health education. Approval to conduct the research study was provided by the Human Subjects Review Committee of Texas Woman's University (Appendix A). An invitation to participate in the study (Appendix B) was sent by the researcher to the department chair of three Texas universities and each of the chairs gave permission for the institution's participation. One of the universities who initially agreed to participate changed its position three days prior to data collection. The researcher subsequently contacted another co-educational Texas university, which agreed to participate.

The study sample included both master's and doctoral students from health education programs in three Texas universities (Table 1). Of the total number of

completed surveys received ($\underline{n}$ = 95), 23 were received from students who did not have 12 or more credit hours in a graduate program or who did not claim health education as their major, and those respondents were excluded from the sample. Therefore, the final sample was comprised of 72 respondents.

Table 1

Graduate Degree Classification

University Affiliation	MS	%	PhD	%	M+D	%
Group A	24	53.3	25	92.6	49	68.1
Group B	19	42.2	0	0.0	19	26.4
Group C	2	4.4	2	7.4	4	5.5
Total in Sample	45	100.0	27	100.0	72	100.0

By age, the participants in the study ranged in age from 20 to 55+ years (Table 2). The largest reporting group of master's students (36%) fell in the 24-year old to 29-year-old range, and the largest reporting group of doctoral students (41%) fell in the 40- year old to 55-year-old range. Of those participants who identified their gender (five did not indicate gender), 22% were males and 78% females.

The largest proportion of both master's and doctoral students indicated they were married (49% and 70%, respectively). By race/ethnicity, Caucasian or White participants accounted for 75% of the sample, followed by African American (11.1%), Asian or Pacific Islander (8.3%), and American Indian (1.4%). No Hispanic individuals participated in the study.

Table 2

Age, Gender, Marital Status and Race/Ethnicity

	MS	%	PhD	%	Total	%
Age of Student						
20-23	3	7	1	4	4	5.6
24-29	16	36	4	14	20	27.8
30-39	13	29	8	30	21	29.2
40-55	12	27	11	41	23	31.9
Over 55	1	2	3	11	4	5.6
Gender						
Male	11	25	4	16	15	22.4
Female	31	75	21	84	52	77.6
Marriage Status						
Not Married	19	43	5	19	24	33.3
Married	22	49	19	70	41	56.9
Divorced	2	4	2	7	4	5.6
Widowed	2	4	1	4	3	4.2
Race/Ethnicity						
American Indian	0	0	1	4	1	1.4
Asian	5	12	1	4	6	8.3
African American	7	17	1	4	8	11.1
Caucasian	30	71	24	88	54	75.0
Missing					3	4.2

Other data collected included current average grades of participants, number of credit hours currently being taken, hours spent out of class on academic work, and affects of an outside job average. Grades were primarily in the "A" range, with 54.7% of the master's students and 57.7% of the doctoral students in the "A" grade category (Table 3). Credit hours of master's and doctoral students range from 6 or fewer to 14. The majority of master's students fell in the 6-or-fewer hour category (64%), and the majority of doctoral students fell in the same category (52%). See Table 3.

Table 3

Current Average and Number of Credit Hours Currently Being Taken

	MS	%	PhD	%	Total	%
Current Grades						
A	23	51	18	69	41	57.7
A-,	17	38	7	27	24	33.8
B+	5	12	1	4	6	8.5
B-, C						
Credit Hours Being Taken						
6-less	28	64	12	52	40	61.5
7-11	12	27	9	39	19	29.2
12-14	4	9	1	4	5	7.7
15-16	0		1	4	1	1.5

Among the respondents, Master's students (51%) and doctoral students (46%)

reported that parents of the participants did not graduate from college (Table 4).

Table 4

College Attendance of Parents

	MS	%	PhD	%	Total	%
Did Not Attend	23	51	12	46	35	49.3
Both Parents	12	27	6	23	18	25.4
Attend	8	18	7	27	15	21.1
Father Only	1	2	1	4	2	2.8
Mother Only	1	2	0		1	1.4
I Don't Know						

The number of hours spent out of class on academic work ranged from 5 or fewer

hour per week to more than 30 hours per week. The greatest proportion of both master's

and doctoral students reported spending 6 to 8 hours on out of class per week (51% and

46%, respectively) as the number of hours spent on out-of-class academic work per week

(51% and 46%, respectively). See Table 5.

Table 5

Hours Spent Out of Class on Academic Work

Hours	MS	%	PhD	%	Total	%
5 hrs/ fewer hrs per week	7	16	3	11	10	14.3
6-10 hrs per week	21	47	8	31	29	41.4
11-15 hrs per week	10	23	6	23	16	22.9
16-20 hrs per week	3	7	3	11	6	8.6
21-25 hrs per week	2	4	2	8	4	5.7
26-30 hrs per week	0		2	8	2	2.9
30 + hrs per week	1	2	2	8	3	4.3

The majority of master's students (51%) reported that their job takes some time from their school-work, while only 33% of doctoral students reported this source of interference. Master's students (35%) reported that their job does not interfere with school, while 20% of doctoral students reported that their job does not interfere with college.

Table 6

Affect of an Outside Job on School Work

	MS	%	PhD	%	Total	%
Don't Have a Job	1	2	4	15	5	7.1
Job Does Not Interfere	15	35	5	18	20	28.6
School Job Interferes Some	22	51	11	41	33	47.1
Job Takes a Lot of Time	5	12	7	26	12	17.1

Research Instrument

The research instrument used in this study, the College Student Experiences Questionnaire (CSEQ), is a nationally recognized questionnaire that has been administered in a large number of colleges and universities throughout the United States (Appendix C). The Center for Postsecondary Research & Planning at Indiana University developed and maintains the CSEQ, and other college and university related research

questionnaires. The CSEQ is an eight-page questionnaire, composed of 157 questions in Likert-type scale format that students typically complete in 30 to 40 minutes. The instrument is divided into 5 sections which measure the following: (1) Background and Demographic Information, (2) The Quality of Effort, (3) The College Environment, (4) The Estimate of Gains, and (5) Miscellaneous items (to be added by the researcher) .

The first 18 questions assess subjects' background information (i.e. parents' education) and demographics (i.e. level of income) and require students to check the appropriate categorical responses. The remaining four sections allow for Likert-scale responses from 1 to 4 (i.e., 1 = "very often", 4 = "never").

The Quality of Effort section provides an estimate of the contributions students make to their own learning as well as resources the institution offers. Some of the questions in the Quality of Effort section deal with personal experiences of students, course learning, experiences with faculty, and student acquaintances.

The College Environment section contains eight scales related to characteristics of college environments that encourage students to put forth effort in educationally purposeful activities. Five of the College Environment Measures rating scales emphasize certain aspects of student learning and personal development. The other three scales measure relationships with others within the college environment.

Estimate of Gains section consists of a group of scales that are used to rate the student's progress toward important educational goals. The questions posed to the respondent in the Estimate of Gains ask to what extent does the respondent feel that they have gained or made progress in areas specified. Some of these areas are acquiring

knowledge and skills applicable to specific work, developing the ability to function as a member of a team, and presenting ideas and information effectively when speaking to others.

In addition to the standard questions, the CSEQ also allows the researcher to add up to 20 additional questions. For this study, the researcher added the Perceptions of Mentoring Questionnaire (Appendix D). This questionnaire consists of 12 questions using a Likert-type scale, which measures graduate students' perceptions regarding mentoring. The researcher developed the questions by expanding some of the mentoring, Quality of Effort, and College Environment related items from the CSEQ. Colleagues also provided input in the development of these questionnaire items. After completion of theses questions, the research committee reviewed them

The CSEQ instrument developers at Indiana University used Guttman-scale analysis and factor analysis of student self-reports to assess content validity . These analyses indicated that the content coherence of each of the scales in the instrument is very high. Regarding instrument reliability, the developers also reported that the reliability coefficients (Cronbach's alpha) for all of the scales are very high, ranging from .81 to .91. Overall, the CSEQ shows strong reliability (CSEQ = .86 Coefficient) among graduate and undergraduate populations.

Data Collection

Data collection began on August 28, 2000 and concluded on September 12, 2000. As stated earlier, approval from the department chairs of these health education programs was obtained prior to the administration of the survey at each institution. The survey

packet used in the data collection included the CSEQ instrument, the Perceptions of Mentoring Questionnaire, the Letter to Participants (Appendix E), a Special Instructions Statement (Appendix F), a pre-addressed postage-paid envelope, and a #2 pencil. For University Group A, the researcher presented the survey packets directly to the voluntary participants in the graduate health education courses; for University Group B and Group C, the packets were administered in the graduate courses by the instructors. The researcher or course instructors were available to assist in answering any questions. The questionnaire took approximately 30 minutes for completion. Some instructors elected to allow class time for students to complete the questionnaire. If class time was not provided, participants completed the questionnaire outside of class and mailed it directly to the researcher using the pre-addressed postage-paid envelope. The pre-addressed envelopes used the researcher's return address so the participant's return address would not be revealed. Students in the graduate classes were also assured that their participation or non-participation would not affect their grades in the course. To maintain confidentiality, participants placed their completed questionnaires in unmarked sealed envelopes before returning them to the institution or to the researcher.

Treatment of the Data

The College Student Experiences Questionnaire supplier at Indiana University scanned completed questionnaires and provided the data set on floppy disk to the researcher for data analyses. SPSS, a statistical software program, was used to analyze the data. Descriptive statistics were used to assess demographic information (e.g., graduate classification, age, gender, and race/ethnicity), and responses to selected items

on Perceptions of Mentoring. T-tests were used to determine significant differences between master's and doctoral graduate student scores on the CSEQ subscales (Quality of Effort, College Environment, Estimate of Gains), CSEQ composite scores (College Experiences), and the Perceptions of Mentoring. A correlation analysis was used to determine relationships among the Quality of Effort, College Environment, Estimate of Gains, and Perception of Mentoring scores. Correlation and t-test statistical significances were determined at the .05 level (2-tailed).

CHAPTER IV

FINDINGS

In this chapter, findings from the analyses of the study data will be reported. The results of descriptive, t-test, and correlations analyses and the findings descriptive analyses of select instrument items will be discussed.

Tests of Hypotheses

Prior to hypotheses testing, data were screened for outliers and homogeneity of variance in order to meet the assumptions required for each statistical analysis. Exploration of the variables using SPSS 9.0 revealed that there were no outliers and that data scores fell within a normal distribution. Furthermore, although the groups were unequal ($\underline{n}$ [sub 1] = 45, $\underline{n}$ [sub 2] = 27) (Table 8), Levene's F revealed in each statistical test that homogeneity of variance existed between the groups ($p \geq .05$).

Missing Data

Exploration of the data revealed that some data were missing. Some participants either skipped items or purposely chose not to give a response. To accommodate this in the data analyses, the group mean for the item was inserted for the missing value. As Tabachnick and Fidell (1996) report, in the absence of all other information, the mean is the "best guess" about the value of a variable. Part of the attraction of this procedure is that it is conservative; the mean for the distribution as a whole does not change and the researcher is not required to guess at missing values. On the other hand, this procedure does effect the variance, since the variance of a value is reduced (because the mean is probably closer to itself than to the missing value it replaces), and the correlation the

variable has with other variables is reduced due to the reduction in variance. However, since there were a minimal number of missing items per analysis ($x = 3$), the overall results were not greatly impacted.

Results of Data Analyses

Ho1: There are no significant differences in Quality of Effort Scores between health education master's and doctoral students.

A t-test for two independent groups was used to compare Quality of Effort scores between the two groups. The results indicated that there were no significant differences in Quality of Effort between master's and doctoral students ($t_{-1.74}$, $p \geq .05$). See Table 7.

Table 7

T-test for Quality of Effort Scores

Classification	n	x	sd	SEM	df	t	p
Master's	45	256.96	37.90	5.65	70	-1.74	.86
Doctoral	27	272.85	36.80	7.08		-1.76	.09

Ho2: There are no significant differences in College Environment scores between health education master's and doctoral students.

A t-test for two independent groups was used to compare College Environment scores between the two groups. No significant differences were found between the groups ($t_{1.44}$, p. $> .05$). See Table 8.

Table 8

T-test for College Environment Scores

Classification	n	x	SD	SEM	df	t	p
Master's	45	56.44	8.63	1.29	70	1.44	.16
Doctoral	27	53.37	10.48	2.02		1.39	.18

Ho3: There are no significant differences in Estimate of Gain scores between health education master's and doctoral students.

A t-test for two independent groups was used to test for significant mean differences of Estimate of Gain scores between master's and doctoral students in health education. The outcome of the analysis showed there were no significant differences between the groups (t $_{-.47}$, p. $\geq$.05). See Table 9.

Table 9

T-test for Estimate of Gains Scores

Classification	n	x	SD	SEM	df	t	p
Master's	45	65.00	14.84	2.21	70	-.47	.64
Doctoral	27	66.63	13.34	2.57		-.48	.63

Ho4: There are no significant differences in Perception of Mentoring scores between master's and doctoral students.

A t-test for two independent groups revealed that there were no significant differences in perceptions of mentoring between masters and doctoral students. The outcome of the analysis showed there were no significant differences between the groups (t $_{-.46}$ p. $\geq$.05). See Table 10.

Table 10

T-test for Perceptions of Mentoring Scores

Classification	n	x	SD	SEM	df	t	p
Master's	45	32.53	6.38	.95	70	.46	.65
Doctoral	27	31.81	6.67	1.28		.45	.65

Ho5: There are no significant differences in College Experiences scores between masters and doctoral students in health education.

As indicated by a t-test for two independent groups, there were no significant differences in College Experience scores between master's and doctoral students in health education. The outcome of the analysis showed there were no significant differences between the groups (t $_{-1.16}$ p. $\geq$.05). See Table 11.

Table 11

T-test for College Experiences Scores

Classification	n	x	SD	SEM	df	t	p
Master's	45	411.13	50.78	7.57	70	-1.16	.25
Doctoral	27	424.66	42.83	8.24		-1.22	.23

Ho6: There are no significant relationships between Quality of Effort, College Environment, Estimate of Gains, and Perceptions of Mentoring scores among health education master's and doctoral students.

Correlation analysis was used to determine if relationships existed between College Experience scores among master's and doctoral students. Correlation analyses revealed that there were some significant associations between these variables. Among master's students, there were significant relationships between the following variables:

1. There was a significant positive correlation between Quality of Effort and

    Estimate of Gains ($r^2 = .64$, p. $\leq .01$) (Table 12). This relationship was moderate

    in magnitude. As the scatterplot below (Figure 1) reveals, as scores on Quality of

    Effort increase, Estimate of Gains scores increase as well.

Table 12

Correlation Matrix Between Quality of Effort, Estimate of Gains, College Environment, and Perceptions of Mentoring Among Master's Students in Health Education.

|		QE	GAIN	ENVIR	MENTOR
QEM	Person Correlation	1.000	.645**	.435**	-.516**
	Sig (2-tailed)		.000	.002	.000
	n	45	45	45	45
GAINM	Person Correlation	.645**	1.000	.407**	-.149
	Sig (2-tailed)	.000	.	.005	.330
	n	45	45	45	45
ENVIRM	Person Correlation	.435**	.407**	1.000	-.363*
	Sig (2-tailed)	.002	.005	.	.020
	n	45	45	45	45
MENTORM	Person Correlation	-.516**	-.149	-.363*	1.000
	Sig (2-tailed)	.000	.330	.020	.
	n	45	45	45	45

* Correlation is statistically significant at the 0.05 level (2-tailed).
** Correlation is statistically significant at the 0.01 level (2-tailed).

Figure 1. Scatterplot of Correlation Between Quality of Effort and Estimate of Gain
Scores Among Master's Students in Health Education
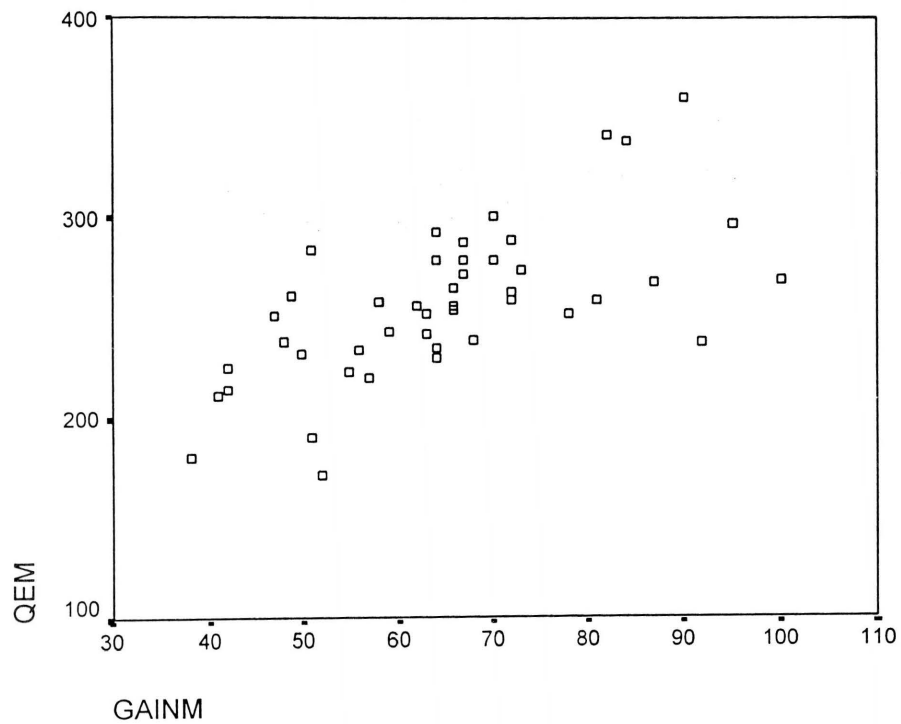
There was a significant positive relationship between Quality of Effort and College Environment (r^2 = .44, p. $\leq$ .01) (Table 12). However, the association was not very strong. As the scatterplot below (Figure 2) depicts, as the students' scores on College Environment increase, so do scores on Quality of Effort.

Figure 2. Scatterplot of Correlation Between Quality of Effort and College Environment Scores Among Master's Students in Health Education.
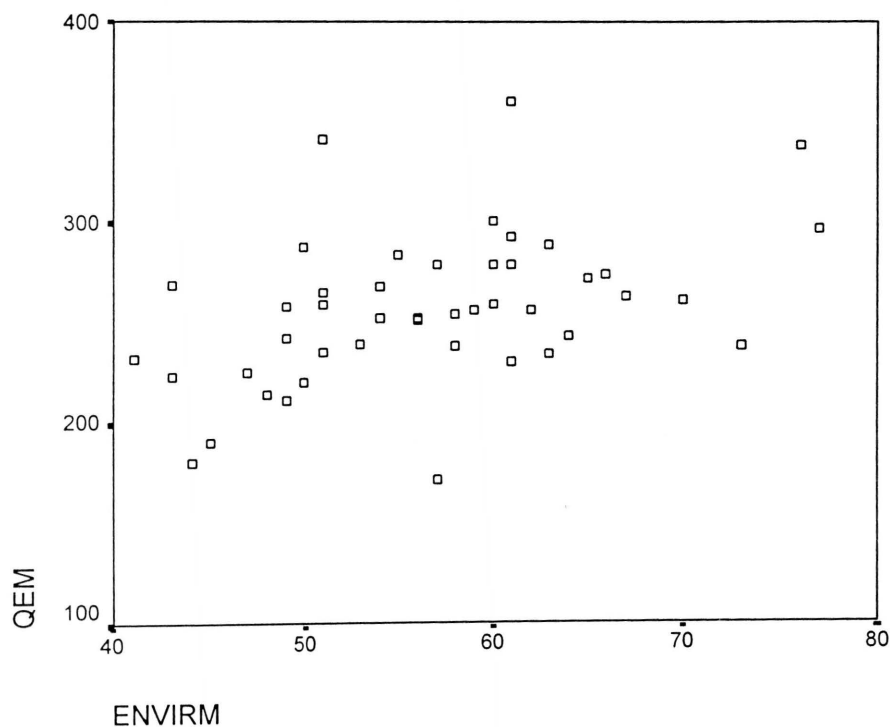
There was a significant negative correlation between Estimate of Gain and

Perceptions of Mentoring among master's students ($r^2 = -.52$, p. <.01). As the correlation

coefficient reveals (Table 12), this relationship between the two variables was modest.

As the scatterplot below (Figure 3) illustrates, as the students' scores on Quality of Effort

increase, their scores on Perceptions of Mentoring decrease.

Figure 3. Scatterplot of Correlation Between Quality of Effort and Perceptions of
Mentoring Scores Among Master's Students.
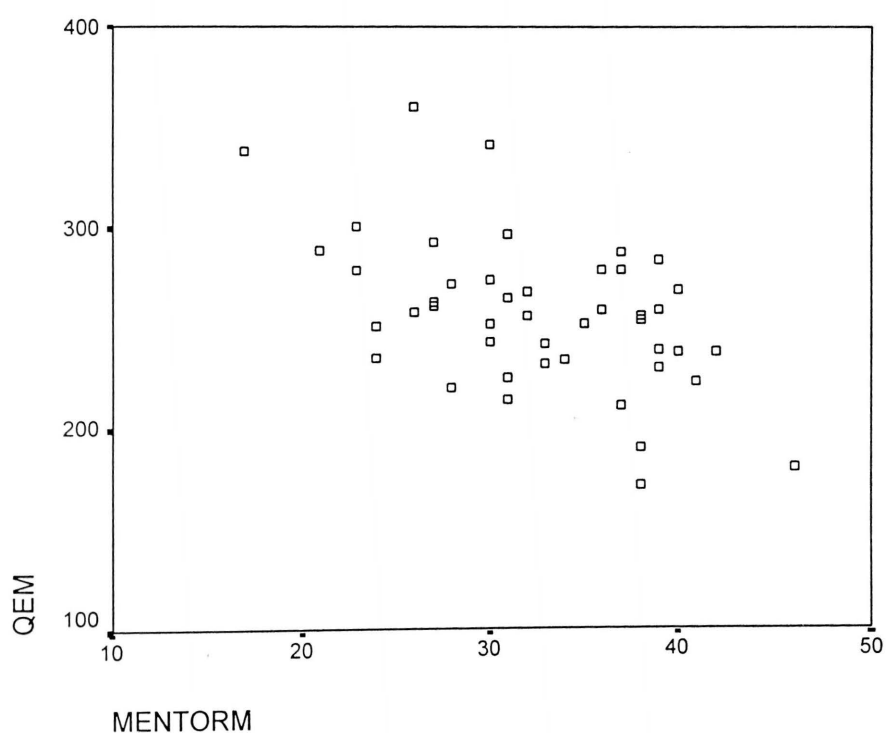
There was a significant negative correlation between College Environment and Perceptions of Mentoring among master's students (r^2 = -.35, p. $\leq$ .05) (Table 12). However, this relationship, as evidenced by the correlation coefficient, is weak. As the scatterplot below (Figure 4) reveals, as student's scores on College Environment increase, their scores on Perceptions of Mentoring decrease.

Figure 4. Scatterplot of Correlation Between College Environment and Perceptions of Mentoring in Master's Health Education Students.
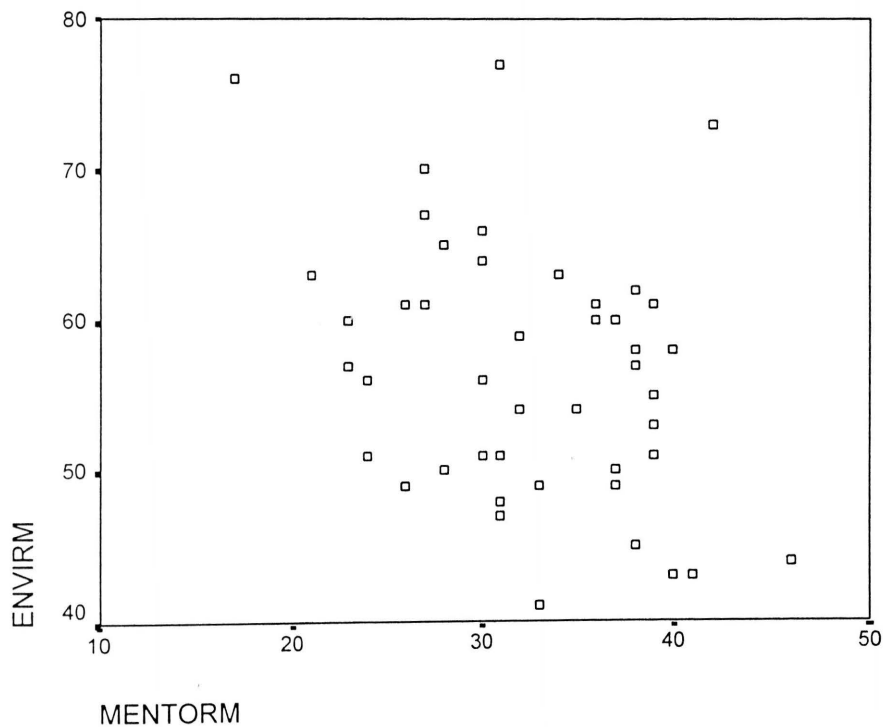
There was a significant positive correlation between College Environment and Estimate of Gain scores among master's students in health education ($r^2 = .41$, p. $\leq .01$) (Table 12). This relationship was moderate in magnitude, as shown by the R-square value (Table 13). As the scatterplot below (Figure 5) reveals, as the students' scores on College Environment increase, so do their scores on Estimate of Gains.

Figure 5. Scatterplot of Correlation Between College Environment and Estimate of Gain Scores in Master's Students in Health Education.
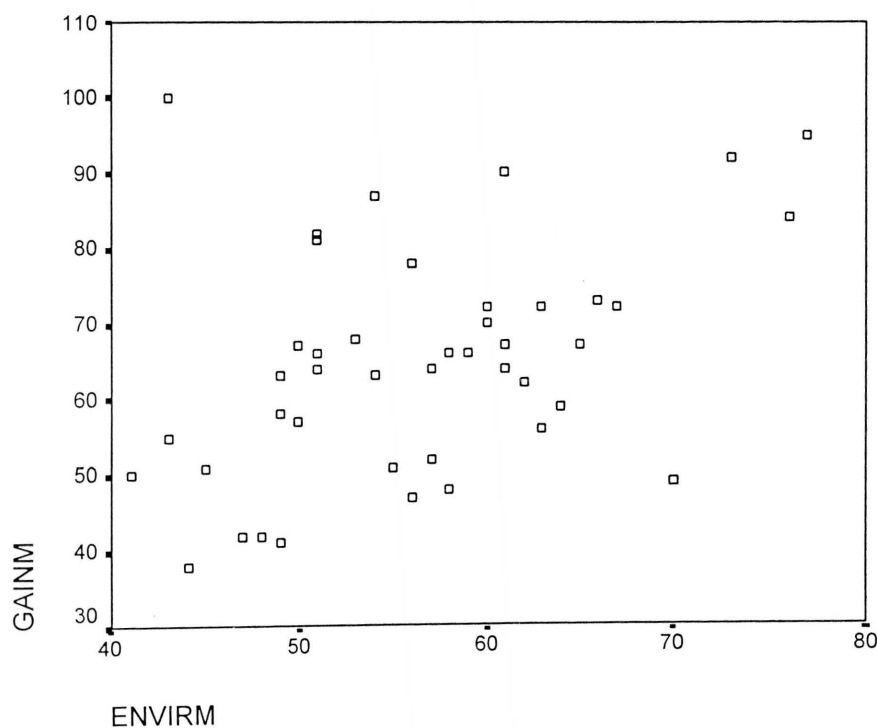
Among the doctoral students in health education, there are only two significant correlations between variables. The results show that there was a significant negative correlation between Quality of Effort and Perceptions of Mentoring ($r^2 = -.46$, p. $\leq .05$). See Table 13.

Table 13

Correlation Matrix Between Quality of Effort, Estimate of Gains, College
Environment, and Perceptions of Mentoring Among Doctoral Students in Health
Education.

		QE	GAIN	ENVIR	MENTOR
QED	Person Correlation	1.000	.155	.248	-.459**
	Sig (2-tailed)	.	.441	.212	.016
	n	27	27	27	27
GAIND	Person Correlation	.155	1.000	.491**	-3.61
	Sig (2-tailed)	.441	.	.009	.064
	n	27	27	27	27
ENVIRD	Person Correlation	.248	.491**	1.000	-.313
	Sig (2-tailed)	.212	.009	.	.112
	n	27	27	27	27
MENTORD	Person Correlation	-.459**	-.361	-.313	1.000
	Sig (2-tailed)	.016	.064	.112	.
	n	27	27	27	27

* Correlation is statistically significant at the 0.05 level (2-tailed).
** Correlation is statistically significant at the 0.01 level (2-tailed).

The magnitude of the association was moderate. The scatterplot below (Figure 6)

illustrates the negative linear relationship between the two variables for doctoral students.

As Quality of Effort scores increase, Perceptions of Mentoring scores decrease.

Figure 6. Scatterplot of Correlation Between Quality of Effort and Perceptions of
Mentoring Scores in Doctoral Students in Health Education
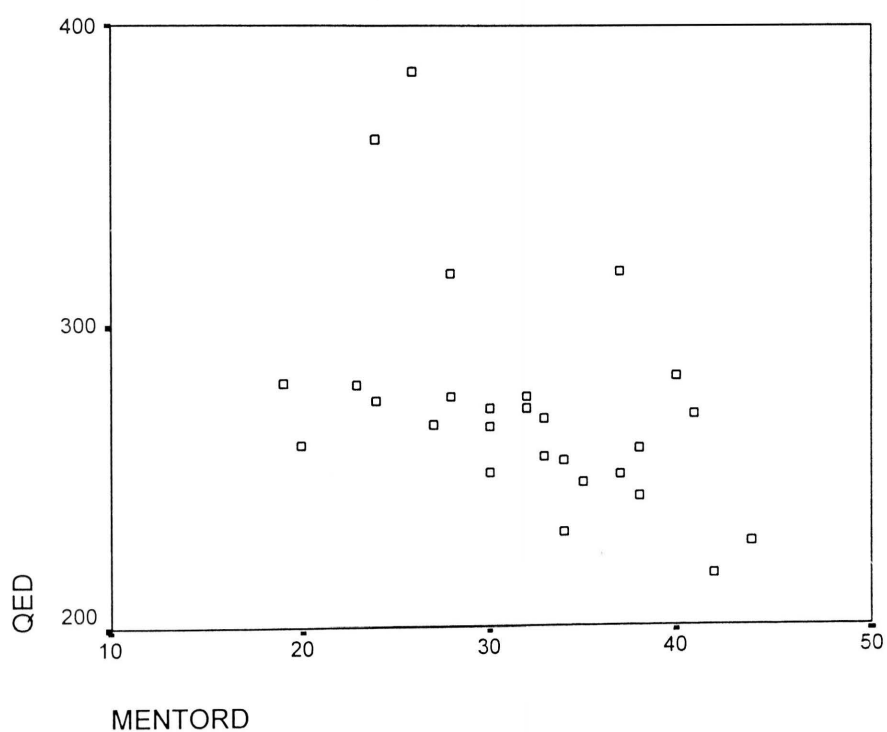
There was a significant positive correlation between College Environment and Estimate of Gain scores among doctoral students ($r^2 = .49$, p. $\leq$ .01). See figure 6. The association between the two variables was moderate. As the scatterplot below (Figure 7) indicates, as doctoral scores on College Environment increase, Estimate of Gains scores also increase.

Figure 7. Scatterplot of Correlation Between College Environment and Estimate of Gain Scores in Doctoral Students in Health Education
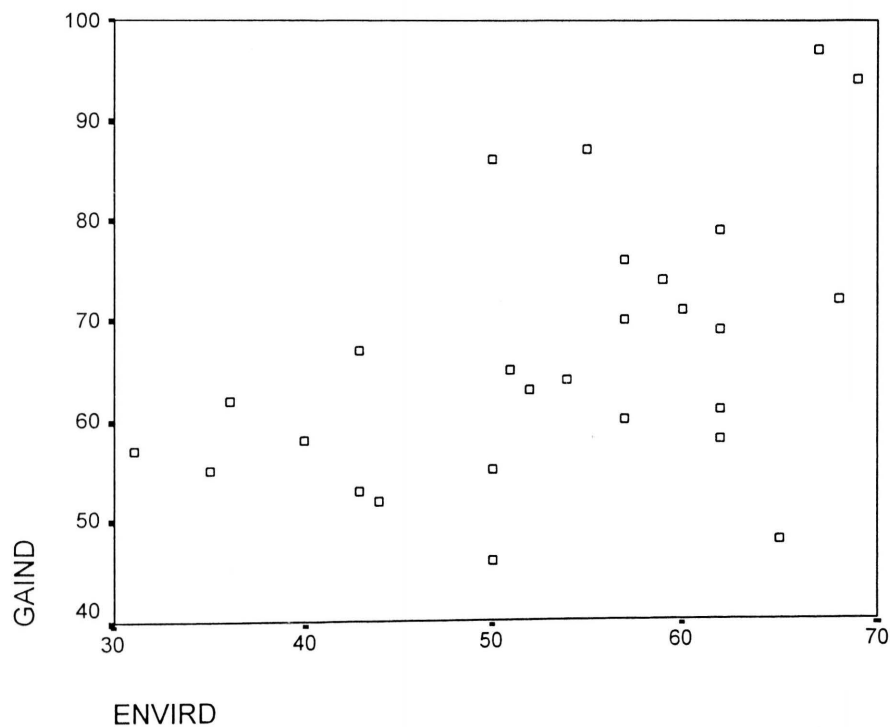
Descriptive Analysis of Selected Instrument Items

The College Student Experiences Questionnaire (CSEQ) was the main instrument used in the study. The CSEQ allowed for up to 20 additional questions of interest to the researcher. Twelve additional questions that focused on mentoring perceptions were used. The results are displayed in frequency tables (Tables 14-25).

Table 14

Participated in Any Formal Mentoring With Faculty

	MS	%	PhD	%	MS+PhD	%
Very Often	4	8.9	1	3.7	5	6.9
Often	3	6.7	1	3.7	4	5.6
Occasionally	9	20.0	8	29.6	17	23.6
Never	29	64.4	17	63.0	46	63.9
Missing n						
Total n	45	100.0	27	100.0	72	100.0

As Table 14 shows, 64.4% of master's and 63.3% of doctoral students reported participating in a formal mentoring programs with faculty at their university. There appears to be little difference in the other categories.

Table 15

Participated in Any Formal Mentoring Within Job

	MS	%	PhD	%	MS+PhD	%
Very Often	8	17.8	5	18.5	13	18.1
Often	11	24.4	6	22.2	17	23.6
Occasionally	15	33.3	5	18.5	20	27.8
Never	11	24.4	11	40.7	22	30.6
Missing n						
Total n	45	100.0	27	100.0	72	100.0

Table 15 illustrates that many doctoral students (40.7%) reported never participating in mentoring programs within their job, whereas 33% of master's students reported occasionally participating in mentor programs within their job.

Table 16

Participated in Any Formal Mentoring From Outside Organizations, Colleagues, or Peers

	MS	%	PhD	%	MS+PhD	%
Very Often	1	2.3	2	7.4	3	4.2
Often	9	20.5	5	18.5	14	19.7
Occasionally	14	31.8	9	33.3	23	32.4
Never	20	45.5	11	40.7	31	43.7
Missing n	1				1	
Total n	44	100.0	27	100.0	71	100.0

Forty-five percent of master's students and 40.7% of doctoral students reported that they never participated in any formal mentoring from outside organizations, colleagues, or peers (Table 16).

Table 17

Participated in Any Informal Mentoring With Institution's Faculty

	MS	%	PhD	%	MS+PhD	%
Very Often	3	6.7	4	14.8	7	9.7
Often	6	13.3	6	22.2	12	16.7
Occasionally	14	31.1	6	22.2	20	27.8
Never	22	48.8	11	40.8	33	45.8
Missing n						
Total n	45	100.0	27	100.0	72	100.0

Table 17 shows the largest proportions of master's students (48.8%) and doctoral students (40.8%) reported that they never participated in any informal mentoring from outside organizations, colleagues, or peers.

Table 18

Participated in Any Informal Mentoring Within Job

	MS	%	PhD	%	MS+PhD	%
Very Often	10	22.2	6	22.2	16	22.2
Often	10	22.2	9	33.3	19	26.4
Occasionally	14	31.1	7	25.9	21	29.2
Never	11	24.5	5	18.6	16	22.2
Missing $\underline{n}$						
Total $\underline{n}$	45	100.0	27	100.0	72	100.0

For both master's and doctoral students, there appears to be an equal distribution of responses regarding their participation in informal mentoring programs within their job. See Table 18.

Table 19

Participated in Any Informal Mentoring From Outside Organizations, Colleagues, or Peers

	MS	%	PhD	%	MS+PhD	%
Very Often	4	8.9	3	11.1	7	9.7
Often	9	20.0	6	22.2	15	20.8
Occasionally	12	26.7	9	33.3	21	29.2
Never	20	44.4	9	33.3	29	40.3
Missing $\underline{n}$						
Total $\underline{n}$	45	100.0	27	100.0	72	100.0

The largest proportion of master's students (44.4%) reported that they never participated informally in a mentoring program outside organizations, colleagues, or peers. For doctoral students, two group responses total 66% as occasionally and never participating in an informal mentoring program from outside organizations, colleagues, or peers (Table 19).

Table 20

Feel That Mentoring Would Have a Positive Impact on Marketability as a Professional

	MS	%	PhD	%	MS+PhD	%
Very Often	15	33.3	12	44.4	27	37.5
Often	14	31.1	8	29.6	22	30.6
Occasionally	13	28.9	5	18.5	18	25.0
Never	3	6.7	2	7.4	5	6.9
Missing n						
Total n	45	100.0	27	100.0	72	100.0

In Table 20, the majority of master's students (93.3%), and doctoral students (91.1%) reported that mentoring would have a positive impact on their marketability as a professional.

Table 21

Feel That Mentoring Would Accelerate Degree Completion

	MS	%	PhD	%	MS+PhD	%
Very Often	8	18.2	7	25.9	15	21.1
Often	10	22.7	7	25.9	17	23.9
Occasionally	12	27.3	4	14.8	16	22.5
Never	14	31.8	9	33.3	23	32.4
Missing n	1				1	
Total n	44	100.0	27	100.0	71	100.0

In the reported results, there appears to be an equal percentage distribution of either master's and doctoral students who reported that they felt mentoring would allow them to complete their degree sooner (Table 21).

Table 22

Overall, the Universities' Climate Encourages Formal Mentoring

	MS	%	PhD	%	MS+PhD	%
Very Often	2	4.4	1	3.7	3	4.2
Often	11	24.4	2	7.4	13	18.1
Occasionally	16	35.6	11	40.7	27	37.5
Never	16	35.6	13	48.1	29	40.3
Missing n						
Total n	45	100.0	27	100.0	72	100.0

Table 22 illustrates that most master's (71.2%) and doctoral (88.8%) students perceived that overall, their universities' climate occasionally or never encouraged mentoring.

Table 23

Overall, Your Department or Universities' Climate Encourages Informal Mentoring

	MS	%	PhD	%	MS=PhD	%
Very Often	2	4.4	5	18.5	7	9.7
Often	18	40.0	6	22.2	24	33.3
Occasionally	17	37.8	13	48.1	39	41.7
Never	8	17.8	3	11.1	11	2.8
Missing n						
Total n	45	100.0	27	100.0	72	100.0

The largest reporting group of master's students (40.0%) perceived that overall, their department or universities' climate encourages informal mentoring often. In contrast, doctoral students (48.1%) perceived that overall, their department or universities' climate encourages informal mentoring occasionally (Table 23).

Table 24

Feel that Your Department or Institution Would Benefit From a Formal Mentoring Program

	MS	%	PhD	%	MS+PhD	%
Very Often	17	38.6	12	44.4	29	40.8
Often	18	40.9	4	14.8	22	31.0
Occasionally	8	18.2	9	33.3	17	23.9
Never	1	2.3	2	7.4	3	4.2
Missing n	1				1	
Total n	44	100.0	27	100.0	71	100.0

Table 24 illustrates that master's students (97.7%) felt that their department or institution would benefit from a formal mentoring program. Doctoral students were also positive (92.6%) regarding a formal mentoring program for their department or institution.

Table 25

If Your Department or Institution Adopted a Formal Mentoring Program, Would You Participate

	MS	%	PhD	%	MS+PhD	%
Very Often	17	37.8	12	44.4	29	40.3
Often	17	37.8	9	33.3	26	36.1
Occasionally	9	20.0	5	18.5	14	19.4
Never	2	4.4	1	3.7	3	4.2
Missing n						
Total n	45	100.0	27	100.0	72	100.0

In Table 25, both master's (95.6%) and doctoral (96.3%) students reported in favor of adopting and participating in a formal mentoring program.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

In this chapter, a discussion of the results of the data analyses conducted for the study is presented. In addition, conclusions drawn from the study and recommendations for future research are discussed.

DISCUSSION

In 1993, graduate students accounted for 25% of college and university populations and admissions continue to increase (Baird, 1993). Although a number of studies on graduate students' retention and degree attainment have been conducted, no attention has been given to examining how factors that affect these measures of success may differ between master's and doctoral students. It is imperative that college and university administrators, faculty, and graduate students understand these influencing factors and how they may affect students at the master's level versus the doctoral level. As roles and responsibilities of health educators continue to change, administrators of graduate programs that prepare health professionals must be aware of these important factors so that they can be effectively addressed, thereby assuring student satisfaction and success in their progression through the program.

To contribute to the base of knowledge on these issues, the purpose of this study was to assess and compare university experiences and mentoring perceptions of master's and doctoral students in health education programs. There were two major areas of study, namely, college experiences and perceptions of mentoring.

Differences Between Master's and Doctoral Students
For University Experiences and Mentoring Perceptions

Research on graduate education studies has primarily focused on retention and attrition of graduate students' general population (Bowen & Rudenstein, 1992). Previous research on the differences between master's and doctoral students regarding either university experiences or mentoring perceptions were not found after an extensive literature search. When these two levels of graduate students were examined in this study using the College Student Experiences Questionnaire (CSEQ) and Perceptions of Mentoring Questionnaire, no significant differences were found between these two groups for Quality of Effort, College Environment, Estimate of Gains, and Perceptions of Mentoring. Although the causes of these findings from this study have not been investigated, several potential reasons can be offered. Program characteristics might play a role in the results of this study. For example, two of the three health education programs used a similar curriculum for both master's and doctoral degrees, and students in both degree programs attended the same classes. The same faculty also provides teaching and advising to both groups. These program characteristic could very well have influenced the results of this study because the majority of the students were in health education programs that provide teaching and advising to both master's and doctoral students.

Unequal numbers in the graduate levels of the respondents may have affected the findings (63% master's students versus 37% doctoral students). Also, another issue for consideration is the number of females (77.6%) in the study. As expected, the master's group was younger, with the majority in the 24- to 29-year- old age range

(59%), and the majority of the doctoral students in the 40- to 55- year-old age range (85%). In both groups, the majority was married. This background information supports the characteristics of graduate students presented by Baird (1993, p.3), in which he states graduate students are older, have experience working, and have many adult and family responsibilities. The majority of grades by both groups were in the A to A- range, which leads one to conclude that the Quality of Effort and Estimate of Gain by graduate students is high. In addition, the majority of master's and doctoral students were taking 6 hours or less, which may be due to the fact that many of these students work or have family responsibilities. In all cases, there was no significant difference between master's and doctoral students Quality of Effort, College Environment, Estimate of Gains and Perceptions of Mentoring. This may be the result of high motivation and strong work ethic.

<div align="center">Relationships Among College Experience
and Mentoring Variables</div>

According to researchers who have conducted studies using the CSEQ instrument, the Quality of Effort scale is the best predictor of success at college because it determines how much students contribute to their own learning and to finding resources available to them by their college or university (CSEQ, 1999). The College Environment scales measure the college student's perception of the institution's educational purpose and its ability to encourage desired behaviors and foster relationships among those people that are supportive of those purposes and behavior (CSEQ, 1999). The Estimate of Gains scales consist of student ratings of their progress toward important educational goals (CSEQ, 1999). Perceptions of Mentoring questions

relate to the perceptions and feelings of master's and doctoral students toward mentoring.

Overall, in this study, there were more relationships among the college experience and mentoring variables for master's students compared to doctoral students. For example, for the master's students, Quality of Effort and Estimate of Gains had a moderate positive relationship (Table 13), whereas there was no significant relationship for these measures for the doctoral student group. This relationship found for the master's students may be the result of this groups experiencing a higher level of comfort and familiarity of the faculty and university, and the discipline among doctoral students toward graduate school (Baird, 1993).

A moderate positive relationship (Table 13) was also found between Quality of Effort and College Environment for master's students, while no statistically significant relationship existed for the doctoral group. It is possible that college environment may be more important to the master's student, who is new to the graduate school environment, compared to the doctoral student who has already experienced it. Conversely, the adult learner returning to graduate school may need some form of "college environmental support." A weak but statistically significant negative relationship was found between College Environment and Mentoring (Table 13) for the master's students, whereas for e students, the relationship was not statistically significant. Perhaps this is because doctoral students were more familiar to the college environment and to graduate school. Master's students, especially those who are returning to school after an extended period of time, may need more guidance,

orientation, and adjustment. As Table 13 indicates, when master's students perceive their environment to be supportive, they perceive mentoring as less important. Therefore, providing mentoring at early stages may increase self-efficacy.

Two correlations were found to be statistically significant for both doctoral and master's students. The first was a moderate negative relationship between Quality of Effort and Mentoring, for both graduate student groups. For these measures, as Quality of Effort score increased, Mentoring score decreased (Tables 13 and 14). These results may be suggesting that as the graduate student's efforts increase, the need for them to be mentored will decrease. In short, mentoring may increase a student's self-efficacy. According to Bandura (1982), self-efficacy is one's perceived control over a situation. Mentoring may be helpful in increasing feelings of self-efficacy in graduate students, which may improve degree completion times, increase retention, improve the student's interaction with the university and faculty, and improve the student's overall "college experience." The other significant correlation that existed among both master's and doctoral students was a moderate positive relationship between College Environment and Estimate of Gain (Tables 13 and 14). This may be underscoring how important college environment is to the effort graduate students put forward and to the goals they set. A supportive environment that includes characteristics such as guidance, advising, and role modeling is perhaps the greatest factor impacting a graduate student's experience.

Perceptions of Mentoring

Formal mentoring programs are structured or officially recognized by an organization. Organizations that provide such programs demonstrate a strong commitment to the growth of the individual by supporting professional training and development. In contrast, informal mentoring relationships are not structured or managed, nor are they usually officially recognized by the organization. These informal relationships are normally spontaneous and occur without external organizational involvement.

Although formal mentoring programs are not a normal function in most businesses, universities, or other organizations, the numbers are growing. In this study, the majority of graduate students reported not participating in any formal mentoring programs with faculty at their institution, workplace, any outside organization, colleagues or peers (Tables 15-17). In most cases, when mentoring did occur, it took the form of informal mentoring with the institution's faculty, and the master's students indicated more participation in this kind of mentoring than in the doctoral students (Table 18). One plausible reason for this finding might be that master's students, being less experienced than the doctoral counterparts with the graduate school environment, may need more direction and advice. Doctoral students have already been through a master's curriculum and therefore "know the ropes" of graduate school and dealing with faculty.

Both groups felt that mentoring would have a positive impact on their marketability as a professional (Table 21). However, while the current literature

60

indicates that mentoring contributes to increased self-efficacy and improved job success, the majority of master's and doctoral students in the study felt that mentoring would not accelerate degree completion (Table 22). This latter perception may be explained by the extent to which the study participants had already advanced in their degree programs. Since all participants had completed a minimum of 12 graduate credit hours, they likely already had a specific degree plan developed for them. Therefore, they may have felt that their schedule of academic progression was already set, and that mentoring would have little affect on the speed at which they would complete their degree. In addition, perhaps they interpreted the question to mean that they would be attending meetings and such, which could take up more of their time.

Overall, the majority of both groups perceived that their university's climate would not encouage a formal mentoring program (Table 23). This finding is supported by the literature, which revealed a low number of formal mentoring programs in existence in college and universities today. Furthermore, Carden (1990) explained that in academia, "departmental norms and atmosphere (collegiality vs. infighting), availability of resources, and faculty-student ration have been rated as most likely to determine the amount and of mentoring that takes place" (p. 284).

However, both the master's (82%) and doctoral (70%) groups did feel that the university or health education departments were supportive of informal mentoring programs (Table 24). The respondents also indicated that they felt the university or department would benefit from a formal mentoring program. Most of both the master's and doctoral students said they would participate in such a program (Tables 25 and 26).

In summary, mentoring could lead to increased self-efficacy; quality of effort, and goal setting by students. A mentoring program could also benefit the university, i.e., it might affect the way students perceive it (as being more supportive). As Baird (1993, p. 2) states in support of mentoring:

> Although individuals at nearly all stages of life can benefit from mentorship, graduate students may be especially in need of it. As the sociologist Morris Zelditch, Jr., (1990) stated in a speech to graduate students at Arizona State University, mentorship is essential to graduate education for three reasons. First, graduate education, at least in some respects, is job training, and it can be enhanced by having a mentor who is well placed in networks that can benefit the student. Second, because mentoring focuses on methods and means of creating knowledge, it is best done by someone who is experienced in the creation of knowledge. Third, mentoring involves socialization to the values, norms, practices, procedures, and attitudes of the discipline and the academy, and such learning is best transmitted by someone who is already a member of the profession (p.72).

CONCLUSIONS

Regarding the proposed hypotheses, this study found the following:

Ho1: There were no significant differences in Quality of Effort between master's and doctoral students. Therefore, Ho failed to reject at the .05 level.

Ho2: There were no significant differences found in College Environment scores between master's and doctoral students. Therefore, Ho failed to reject at the .05 level.

Ho3: There were no significant differences in Estimate of Gain scores between health education master's and doctoral students. Therefore, Ho failed to reject at the .05 level.

Ho4: There were no significant differences in Perception of Mentoring scores between master's and doctoral students. Therefore, Ho failed to reject at the .05 level.

Ho5: There were no significant differences in College Experiences scores between masters and doctoral students in health education. Therefore, Ho failed to reject at the .05 level.

Ho6: There were significant relationships between Quality of Effort, College Environment, Estimate of Gains, and Mentoring scores between health education master's and doctoral students. Therefore, Ho was rejected at the .05 level.

RECOMMENDATIONS

This study is one of the first to be conducted that investigated potential differences in master's and doctoral students' assessment of college experiences and perceptions of mentoring, and the only study to date which has focused on the topic as it relates to health education graduate students. Recommendations for future research include the following:

1. Conduct similar research using larger samples from across the nation in order to determine if there is a need to mentor master's and doctoral students as separate groups.

2. Conduct a similar study using other health education related programs (e.g., Public Health, Kinesiology and Health Care Administration) to determine similarities or differences as compared to results of this health education group.

3. Conduct research to assess whether student and faculty needs are being met in the graduate programs.

4. Conduct a similar study to investigate which type of mentoring would benefit health education programs both for the faculty and graduate students.

5. Conduct a similar study, which examines issues as they relate to health studies undergraduate students.

6. Incorporate qualitative methods, such as focus groups and interviews in a study about mentoring.

7. Expand this study to include regression analyses of specific variables of interest.

8. Explore, in more detail, the predisposing, enabling, and reinforcing factors that contribute to a supportive college environment.

9. Conduct research on how the Transtheoretical Model (Stages of Change) may be used at universities to gauge the institutions' and students' readiness for mentoring adaptation.

10. Examine university barriers that discourage informal mentoring initiatives.

REFERENCES

Albom, M. (1997). <u>Tuesdays with Morrie: An old man, a young man, and life's greatest lesson</u>. New York: Doubleday.

Astin, A.W. (1984). Student involvement: A development theory for higher education. <u>Journal of College Student Personnel, 25,</u> 297-308.

Baird, L. L. (1993). <u>Increasing Graduate Student Retention and Degree Attainment.</u> San Francisco: Jossey-Bass.

Bandura, A. (1982). Self-efficacy mechanism in human agency. <u>American Psychologist, 37,</u> 122-147.

Blackwell, J.E. (1987). Mentoring: An action strategy for increasing minority faculty. <u>Academe, 75,</u> 8-14.

Bowen, W.G. & Rudenstine, N. L. (1992). <u>In pursuit of the PhD.</u> Princeton: Princeton University Press.

Brey, R. A. & Ogletree, R. J. (1999). Faculty-graduate student mentoring: Implications for health education. <u>Journal of Health Education, 30</u>(1), 24-29.

Brown, J. C. & Barnett, J. M. (1984). Response of faculty members to medical students' personal problems. <u>Journal of Medical Education, 59,</u> 180-187.

Cambiano, R. L., Denny, G.S., & DeVore, J. B. (2000). <u>Journal of College Admission, 166.</u> 22-29.

Caravalho, G. A., & Maus,T. (1996). Mentoring: Philosophy and practice. <u>Public Management,</u> June, 17-20.

Carden , A. D. (1990, April). Mentoring and adult career development: The evolution of a theory. <u>The Counseling Psychologist, 18</u>(2), 275-299.

Carruthers, J. (1993). <u>The principles and practices of mentoring and the return of the mentor.</u> London: The Palmer Press.

Chao, G. T., Walz, P. M., & Gardner, P. D. (1992). Formal and informal mentorships: A comparison of mentoring functions and contrast with non-mentored counterparts. <u>Personnel Psychology, 45,</u> 619-636.

Cohen, N., Dr. (1999). <u>Effective mentoring.</u> Amherst, MA: HRD Press.

CSEQ (1999). Center for Postsecondary Research & Planning. (1999). College Student Experiences Questionnaire Indiana University [On-Line serial]. Available http://www.indiana.edu/~cseq/overview.html

Dreher, G. F. & Ash, R. A. (1990). A comparative study of mentoring among men and women in managerial, professional, and technical positions. Applied Psychology, 75(5), 539-546.

Fagenson, E. A. (1988). The power of the mentor. Groups & Organization Studies, 13, 182-194.

Goplerud, E. N. (1980). Social support and stress during the first year of graduate school. Professional Psychology, 11, 283-290.

Halleck, S. L. (1976). Emotional problems of the graduate student. In J. Katz & R. T. Hartnett (Eds.), Scholars in the making, pp. 161-176. Cambridge, MA: Ballinger.

Healy, C. C. & Welchert, A. J. (1990). Mentoring relations: A definition to advance research and practice. Educational Researcher, 19(9), 17-21.

Isaac, P. D. (1993, Winter). Measuring graduate student retention. New Directions for Institutional Research, 80, 13-25.

Joint Commission on Accreditation of Healthcare Organizations (JCAHO)(2000). [Online]. http://www.jcaho.org.

Johnson, S.T. & DeFreece, M.T. (1984). Extending classroom office and self: Developing an instrument to measure attitudes toward faculty development in renewal activities. Paper presented at the American College Personnel Association, Baltimore, April, 1984. (Eric Reproduction Service No. ED 243393)..

Junn, E.N. & Fuller, C.B. (1996). Students' perceptions of services on campus. College Student Journal, 30, (2), 146-157.

Kalsner, L. (1991). Issues in college student retention. New York, NY: Higher Education Extension Service Review. (ERIC Document Reproduction Service No. ED3 5 0 894).

Keller, J. M. (1987). Development and the use of the ARC's model of instructional design. Journal of Instructional Development, 10., 2-10.

Kerka, S. 1989. Retaining students in higher education. ERIC Digest No. 88. Columbus, Ohio: ERIC Clearinghouse on Adult, Career and Vocational Education. (ERIC Document Reproduction Service No. ED 308401). Retrieved March 11, 1997. [Online]. http://www.ed.gov/databases/ERIC-digests/ed3O8401.html.

Kovach, T.M. & Moore, S.M. (1992). Leaders are born through the mentoring process. ASHA, 33.

Kridel, C., Bullough, R. V. Jr., & Shaker, P. (1996). Teachers and Mentors. New York: Garland.

Lamport, M.A. (1993). Student-faculty informal interaction and the effect on college students: A review of the literature. Adolescence, 28 (112), 971-990.

Lepper, M. (1988). Intrinsic motivation. Cognitive and Instruction. 5, 289-309.

Lindsay, G.A., Hanks, W.A., Neiger, B.L. & Barnes, M.D. (2000). Enhancing student employability: Perceptions of faculty advisors and community health practitioners. Journal of Health Education, 31 (1), 10-13.

MacKinnon-Slaney, F. (1994). The adult persistence in learning model. Journal of Counseling and Development, 72 (2), 268-275.

Mahayosnand, P.P. & Stigler, M.H. (1999). The need for mentoring in public health, 1-3. [Online]. http://www.apha.org/ppp/mentoring/Indexja.htm.

Mallinckrodt, B. & Leong, F. T. (1992). Social support in academic programs and family environments: Sex differences and role conflicts for graduate students. Journal of Counseling and Development, 706(6), 716-724.

MentorNet. (2000). The national electronic industrial mentoring network for women in engineering and science. [Online]. http://www.mentornet.net.

Murray, M. & Owen, M. A. (1991). Beyond the myths and magic of mentoring. San Francisco, CA.: Jossey-Bass.

National Academy Press. (1997). Adviser, teacher, role model, friend. National Academy Press: Washington, D.C.

Newby, T. (1989). Increasing intrinsic motivational change within organizations. Performance and Instruction, 28, 36-41.

Newby, T. J. & Heide, A. (1992). The value of mentoring. Performance Improvement Quarterly, 5(4), 2-15.

Ng, D. (1969). Variables related to academic success of graduate recreation majors in the school of health, physical education, and recreation at Indiana University. Unpublished master's thesis at Indiana University.

Noel-Levitz. (1999). Student satisfaction inventory (SSI) [Online]. http://www.noellevitz.com/ret/ssi/ssi.html.

PEP Program (2000). Peer Mentoring Program. [Online]. http://www.mscd.edu/student/resources/counsel/peereducationprogram.htm.

Oramaner, M. (1981). The other side of student-faculty relationships. Community and Junior College Journal, 51, 12-15.

Paolillo, J. (1982). The predictive validity of selected admissions variables relative to grade point average earned in a Master of Business Administration program. Educational and Psychological Measurement, 42, 1163-1167.

Penn, G. (1999). Enrollment management for the 21st century: Delivering institutional goals, accountability, and fiscal responsibility. ERIC Clearinghouse on Higher Education, Washington, D.C. ED 00-00-0036, 4 pps.

SPSS. (1999). SPSS Base 9.0 Applications Guide. SPSS, Inc, Chicago, Il.
Tabachnick, B.G. & Fiddell, L.S. (1996). Using multivariate statistics. Third Edition, Harper college Publishers, New York, N.Y.

Walker, G. & Freedman, M. (1996). Social change - One on one: The new mentoring movement. The American Prospect (27), 75-81.

Youngblood, S. & Martin, B. (1982). Ability testing and graduate admissions: Decision process modeling and validation. Educational and Psychological Measurement, 42, 1153-1162.

APPENDICES

APPENDIX A

Human Subjects Review Committee Approval

TEXAS WOMAN'S
UNIVERSITY

DENTON/DALLAS/HOUSTON

July 11, 2000

Mr. Don Ciulla
13 Highview Circle
Denton, TX 76205

Dear Mr. Ciulla:

Re: *An Assessment of University Experiences and Mentoring Perceptions of Health Education Graduate Students*

The above referenced study has been reviewed by a committee of the Institutional Review Board (IRB) and was determined to be exempt from further TWU IRB review.

If applicable, agency approval letters obtained should be submitted to the IRB upon receipt prior to any data collection at that agency. Because you do not utilize a signed consent form for your study, the filing of signatures of subjects with the IRB is not required.

Another review by the IRB is required if your project changes. If you have any questions, please feel free to call the Institutional Review Board at the phone number listed above.

Sincerely,

Dr. Linda Rubin, Chair
Institutional Review Board - Denton

APPENDIX B

Letter To Participating Institution

July 20, 2000

Chair of Health Education & Health Promotion
City, Texas 77777

Re: Dissertation Research Title: An assessment of university experiences and
mentoring perceptions of health education graduate students.

Dear Dr.,

Thank you for your time yesterday discussing my dissertation research request. I am
requesting your approval for participation of currently enrolled graduate students in the
Department of Health Education.

Graduate students represent 25% of the student population in the U,S, today and
understanding their needs is important to health educators and administrators. As we
discussed, the purpose of this study is to assess and compare university experiences and
mentoring perceptions of enrolled health education masters and doctoral students.

I realize that time is a precious commodity, so I have carefully chosen the first
week of the fall semester to collect data (when the instructor's curriculum may allow for
more flexibility). A colleague or myself will present the questionnaire to the class
instructors during the week of September 6, 2000. If the instructor wishes to provide
time during class (approximately 30 minutes) for completion of the questionnaire, that
would be preferable. If not, the participant will complete the questionnaire outside of
class and mail it directly to me in a pre-addressed postage paid envelope.

The questionnaire will be voluntary and is specifically for those full or part-time
graduate students enrolled in your health education program. Students from other
departments who may be taking a course in health education need not fill out the
questionnaire. In addition, confidentiality and anonymity will be maintained during the
course of the study for both the participant and institution.

After January 5, 2001, I will provide you with a summary document for your
review upon request. I look forward for the department's participation.

I will be available by phone or email to discuss any question you might have. I
will call you in 10 days to follow up. My phone number is 940-XXX-XXXX and email
address is dciulla@iglobal.net.

Respectfully,

Don S. Ciulla

APPENDIX C

College Student Experiences Questionnaire

College Student Experiences Questionnaire

This questionnaire asks about how you spend your time at college--with faculty and friends and in classes, social and cultural activities, extracurricular activities, employment, and use of campus facilities such as the library and student center. The usefulness of this or any other survey depends on the thoughtful responses of those who are asked to complete it. Your participation is very important and greatly appreciated.

The information obtained from you and other students at many different colleges and universities will help administrators, faculty members, student leaders, and others to improve the conditions that contribute to your learning and development and to the quality of the experience of those who will come after you.

At first glance, you may think it will take a long time to complete this questionnaire, but it can be answered in about 30 minutes or less. And you will learn some valuable things about yourself, as your answers provide a kind of self-portrait of what you have been doing and how you are benefitting from your college experience.

You do not have to write your name on the questionnaire. But as you will see on the next page we would like to know some things about you so that we can learn how college experiences vary, depending on students' age, sex, year in college, major field, where they live, whether they have a job, and so forth. To know where the reports come from, a number on the back page identifies your institution.

Your questionnaire will be read by an electronic scanning device, so be careful in marking your responses. **Please use only a #2 black lead pencil.** Do not write or make any marks on the questionnaire outside the spaces provided for your answers. Erase cleanly any responses you want to change. **It is very important to answer all questions;** if you are uncertain about what a question means, use your best judgment.

Thank you for your cooperation and participation!

Age
- ○ 19 or younger
- ○ 20 - 23
- ○ 24 - 29
- ○ 30 - 39
- ○ 40 - 55
- ○ Over 55

Sex
- ○ male
- ○ female

What is your marital status?
- ○ not married
- ○ married
- ○ divorced
- ○ separated
- ○ widowed

What is your classification in college?
- ○ freshman/first-year
- ○ sophomore
- ○ junior
- ○ senior
- ○ graduate student
- ○ unclassified

Did you begin college here or did you transfer here from another institution?
- ○ started here
- ○ transferred from another institution

Where do you now live during the school year?
- ○ dormitory or other campus housing
- ○ residence (house, apartment, etc.) within walking distance of the institution
- ○ residence (house, apartment, etc.) within driving distance
- ○ fraternity or sorority house

With whom do you live during the school year? (Fill in all that apply)
- ○ no one, I live alone
- ○ one or more other students
- ○ my spouse or partner
- ○ my child or children
- ○ my parents
- ○ other relatives
- ○ friends who are not students at the institution I'm attending
- ○ other people: who? ↘

Do you have access to a computer where you live or work, or nearby that you can use for your school work?
- ○ yes
- ○ no

What have most of your grades been up to now at this institution?
- ○ A
- ○ A-, B+
- ○ B
- ○ B-, C+
- ○ C, C-, or lower

Which of these fields best describes your major, or your anticipated major? You may indicate more than one if applicable.
- ○ Agriculture
- ○ Biological/life sciences (biology, biochemistry, botany, zoology, etc.)
- ○ Business (accounting, business administration, marketing, management, etc.)
- ○ Communication (speech, journalism, television/radio, etc.)
- ○ Computer and information sciences
- ○ Education
- ○ Engineering
- ○ Ethnic, cultural studies, and area studies
- ○ Foreign languages and literature (French, Spanish, etc.)
- ○ Health-related fields (nursing, physical therapy, health technology, etc.)
- ○ History
- ○ Humanities (English, literature, philosophy, religion, etc.)
- ○ Liberal/general studies
- ○ Mathematics
- ○ Multi/interdisciplinary studies (international relations, ecology, environmental studies, etc.)
- ○ Parks, recreation, leisure studies, sports management
- ○ Physical sciences (physics, chemistry, astronomy, earth science, etc.)
- ○ Pre-professional (pre-dental, pre-medical, pre-veterinary)
- ○ Public administration (city management, law enforcement, etc.)
- ○ Social sciences (anthropology, economics, political science, psychology, sociology, etc.)
- ○ Visual and performing arts (art, music, theater, etc.)
- ○ Undecided
- ○ Other: What? ↘

Did either of your parents graduate from college?
- ○ no
- ○ yes, both parents
- ○ yes, father only
- ○ yes, mother only
- ○ don't know

Do you expect to enroll for an advanced degree when, or if, you complete your undergraduate degree?
- ○ yes
- ○ no

How many credit hours are you taking this term?
- ○ 6 or fewer
- ○ 7 - 11
- ○ 12 - 14
- ○ 15 - 16
- ○ 17 or more

During the time school is in session, about how many hours a week do you usually spend outside of class on activities related to your academic program, such as studying, writing, reading, lab work, rehearsing, etc.?
- ○ 5 or fewer hours a week
- ○ 6 - 10 hours a week
- ○ 11 - 15 hours a week
- ○ 16 - 20 hours a week
- ○ 21 - 25 hours a week
- ○ 26 - 30 hours a week
- ○ more than 30 hours a week

During the time school is in session, about how many hours a week do you usually spend working on a job for pay? To provide information about your work experiences on <u>and</u> off campus, fill in <u>one</u> oval in <u>each</u> column.

	ON-CAMPUS	OFF-CAMPUS
None; I don't have a job	○	○
1 - 10 hours a week	○	○
11 - 20 hours	○	○
21 - 30 hours	○	○
31 - 40 hours	○	○
More than 40 hours	○	○

If you have a job, how does it affect your school work?

○ I don't have a job

○ My job does not interfere with my school work

○ My job takes some time from my school work

○ My job takes a lot of time from my school work

How do you meet your college expenses? Fill in the response that best approximates the amount of support from <u>each of the various sources</u>.

	None	Very Little	Less Than Half	About Half	More Than Half	All or Nearly All
Self (job, savings, etc.)	○	○	○	○	○	○
Parents	○	○	○	○	○	○
Spouse or partner	○	○	○	○	○	○
Employer support	○	○	○	○	○	○
Scholarships and grants	○	○	○	○	○	○
Loans	○	○	○	○	○	○
Other sources	○	○	○	○	○	○

What is your racial or ethnic identification? (Fill in all that apply)

○ American Indian or other Native American
○ Asian or Pacific Islander
○ Black or African American
○ Caucasian (other than Hispanic)
○ Mexican-American
○ Puerto Rican
○ Other Hispanic
○ Other: What? ⟶

COLLEGE ACTIVITIES

DIRECTIONS: In your experience at this institution during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the ovals to the right of each statement.

Library

	Very Often	Often	Occasionally	Never
Used the library as a quiet place to read or study materials you brought with you.	○	○	○	○
Found something interesting while browsing in the library.	○	○	○	○
Asked a librarian or staff member for help in finding information on some topic.	○	○	○	○
Read assigned materials other than textbooks in the library (reserve readings, etc.).	○	○	○	○
Used an index or database (computer, card catalog, etc.) to find material on some topic.	○	○	○	○
Developed a bibliography or reference list for a term paper or other report.	○	○	○	○
Gone back to read a basic reference or document that other authors referred to.	○	○	○	○
Made a judgment about the quality of information obtained from the library, World Wide Web, or other sources.	○	○	○	○

Computer and Information Technology

	Very Often	Often	Occasionally	Never
Used a computer or word processor to prepare reports or papers.	○	○	○	○
Used e-mail to communicate with an instructor or other students.	○	○	○	○
Used a computer tutorial to learn material for a course or developmental remedial program.	○	○	○	○
Participated in class discussions using an electronic medium (e-mail, list-serve, chat group, etc.)	○	○	○	○
Searched the World Wide Web or Internet for information related to a course.	○	○	○	○
Used a computer to retrieve materials from a library not at this institution.	○	○	○	○
Used a computer to produce visual displays of information (charts, graphs, spreadsheets, etc.)	○	○	○	○
Used a computer to analyze data (statistics, forecasting, etc.).	○	○	○	○
Developed a Web page or multimedia presentation.	○	○	○	○

Never · Occasionally · Often · Very Often

Course Learning

Completed the assigned readings for class. ○○○○

Took detailed notes during class. ○○○○

Contributed to class discussions. ○○○○

Developed a role play, case study, or simulation for a class. ○○○○

Tried to see how different facts and ideas fit together. ○○○○

Summarized major points and information from your class notes or readings. ○○○○

Worked on a class assignment, project, or presentation with other students. ○○○○

Applied material learned in a class to other areas (your job or internship, other courses, relationships with friends, family, co-workers. etc.). ○○○○

Used information or experience from other areas of your life (job. internship. interactions with others) in class discussions or assignments. ○○○○

Tried to explain material from a course to someone else (another student, friend, co-worker, family member.) ○○○○

Worked on a paper or project where you had to integrate ideas from various sources. ○○○○

Writing Experiences

Used a dictionary or thesaurus to look up the proper meaning of words. ○○○○

Thought about grammar, sentence structure, word choice, and sequence of ideas or points as you were writing. ○○○○

Asked other people to read something you wrote to see if it was clear to them. ○○○○

Referred to a book or manual about writing style, grammar, etc. ○○○○

Revised a paper or composition two or more times before you were satisfied with it. ○○○○

Asked an instructor or staff member for advice and help to improve your writing. ○○○○

Prepared a major written report for a class (20 pages or more). ○○○○

Experiences with Faculty

Talked with your instructor about information related to a course you were taking (grades, make-up work. assignments. etc.). ○○○○

Discussed your academic program or course selection with a faculty member. ○○○○

Discussed ideas for a term paper or other class project with a faculty member. ○○○○

Discussed your career plans and ambitions with a faculty member. ○○○○

Worked harder as a result of feedback from an instructor. ○○○○

Socialized with a faculty member outside of class (had a snack or soft drink, etc.). ○○○○

Participated with other students in a discussion with one or more faculty members outside of class ○○○○

Asked your instructor for comments and criticisms about your academic performance. ○○○○

Worked harder than you thought you could to meet an instructor's expectations and standards. ○○○○

Worked with a faculty member on a research project. ○○○○

Art, Music, Theater

Talked about art (painting. sculpture. artists. etc.) or the theater (plays. musicals. dance. etc.) with other students. friends. or family members. ○○○○

Went to an art exhibit gallery or a play. dance. or other theater performance on or off the campus. ○○○○

Participated in some art activity (painting. pottery. weaving. drawing. etc.) or theater event, or worked on some theatrical production (acted. danced. worked on scenery. etc.). on or off the campus ○○○○

Talked about music or musicians (classical. popular. etc.) with other students. friends. or family members. ○○○○

Attended a concert or other music event on or off the campus ○○○○

Participated in some music activity (orchestra. chorus. dance. etc.) on or off the campus. ○○○○

Read or discussed the opinions of art. music. or drama critics. ○○○○

Never
Occasionally
Often
Very Often

Campus Facilities

Used a campus lounge to relax or study by yourself.

Met other students at some campus location (campus center, etc.) for a discussion.

Attended a cultural or social event in the campus center or other campus location.

Went to a lecture or panel discussion.

Used a campus learning lab or center to improve study or academic skills (reading, writing, etc.)

Used campus recreational facilities (pool, fitness equipment, courts, etc.).

Played a team sport (intramural, club, intercollegiate).

Followed a regular schedule of exercise or practice for some recreational sporting activity.

Clubs and Organizations

Attended a meeting of a campus club, organization, or student government group.

Worked on a campus committee, student organization, or project (publications, student government, special event, etc.).

Worked on an off-campus committee, organization, or project (civic group, church group, community event, etc.).

Met with a faculty member or staff advisor to discuss the activities of a group or organization.

Managed or provided leadership for a club or organization, on or off the campus.

Personal Experiences

Told a friend or family member why you reacted to another person the way you did.

Discussed with another student, friend, or family member why some people get along smoothly, and others do not.

Asked a friend for help with a personal problem.

Read articles or books about personal growth, self-improvement, or social development.

Identified with a character in a book, movie, or television show and wondered what you might have done under similar circumstances.

Taken a test to measure your abilities, interests, or attitudes.

Asked a friend to tell you what he or she really thought about you.

Talked with a faculty member, counselor or other staff member about personal concerns.

Student Acquaintances

Became acquainted with students whose interests were different from yours.

Became acquainted with students whose family background (economic, social) was different from yours.

Became acquainted with students whose age was different from yours.

Became acquainted with students whose race or ethnic background was different from yours.

Became acquainted with students from another country.

Had serious discussions with students whose philosophy of life or personal values were very different from yours.

Had serious discussions with students whose political opinions were very different from yours.

Had serious discussions with students whose religious beliefs were very different from yours.

Had serious discussions with students whose race or ethnic background was different from yours.

Had serious discussions with students from a country different from yours.

Scientific and Quantitative Experiences

Memorized formulas, definitions, technical terms and concepts.

Used mathematical terms to express a set of relationships.

Explained your understanding of some scientific or mathematical theory, principle or concept to someone else (classmate, co-worker, etc.)

Read articles about scientific or mathematical theories or concepts in addition to those assigned for a class.

Completed an experiment or project using scientific methods.

Practiced to improve your skill in using a piece of laboratory equipment.

Showed someone else how to use a piece of scientific equipment.

Explained an experimental procedure to someone else.

Compared the scientific method with other methods for gaining knowledge and understanding.

Explained to another person the scientific basis for concerns about scientific or environmental issues (pollution, recycling, alternative sources of energy, acid rain) or similar aspects of the world around you.

79

DIRECTIONS: In conversations with others (students, family members, co-workers, etc.) outside the classroom *during this school year*, about how often have you talked about each of the following?

Topics of Conversation

	Very Often	Often	Occasionally	Never
Current events in the news.	○	○	○	○
Social issues such as peace, justice, human rights, equality, race relations.	○	○	○	○
Different lifestyles, customs, and religions.	○	○	○	○
The ideas and views of other people such as writers, philosophers, historians.	○	○	○	○
The arts (painting, poetry, dance, theatrical productions, symphony, movies, etc.).	○	○	○	○
Science (theories, experiments, methods, etc.).	○	○	○	○
Computers and other technologies.	○	○	○	○
Social and ethical issues related to science and technology such as energy, pollution, chemicals, genetics, military use.	○	○	○	○
The economy (employment, wealth, poverty, debt, trade, etc.).	○	○	○	○
International relations (human rights, free trade, military activities, political differences, etc.).	○	○	○	○

Information in Conversations

	Very Often	Often	Occasionally	Never
Referred to knowledge you acquired in your reading or classes.	○	○	○	○
Explored different ways of thinking about the topic.	○	○	○	○
Referred to something one of your instructors said about the topic.	○	○	○	○
Subsequently read something that was related to the topic.	○	○	○	○
Changed your opinion as a result of the knowledge or arguments presented by others	○	○	○	○
Persuaded others to change their minds as a result of the knowledge or arguments you cited.	○	○	○	○

During this current school year, about how many books have you read? Fill in one response for each item listed below.

	More than 20	Between 10 and 20	Between 5 and 10	Fewer than 5	None
Textbooks or assigned books	○	○	○	○	○
Assigned packs of course readings	○	○	○	○	○
Non-assigned books	○	○	○	○	○

During this current school year, about how many exams, papers, or reports have you written? Fill in one response for each item listed below.

	More than 20	Between 10 and 20	Between 5 and 10	Fewer than 5	None
Essay exams for your courses	○	○	○	○	○
Term papers or other written reports	○	○	○	○	○

How well do you like college?
- ○ I am enthusiastic about it.
- ○ I like it.
- ○ I am more or less neutral about it.
- ○ I don't like it.

If you could start over again, would you go to the same institution you are now attending?
- ○ Yes, definitely
- ○ Probably yes
- ○ Probably no
- ○ No, definitely

THE COLLEGE ENVIRONMENT

Colleges and universities differ from one another in the extent to which they emphasize or focus on various aspects of students' development. Thinking of your experience at this institution, to what extent do you feel that each of the following is emphasized? The responses are numbered from 7 to 1, with the highest and lowest points illustrated. Fill in the oval with the number that best represents your impression on each of the following seven-point rating scales.

Emphasis on developing academic, scholarly, and intellectual qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing aesthetic, expressive, and creative qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing critical, evaluative, and analytical qualities

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing an understanding and appreciation of human diversity

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing information literacy skills (using computers, other information resources)

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on developing vocational and occupational competence

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

Emphasis on the personal relevance and practical value of your courses

Strong Emphasis ⑦ ⑥ ⑤ ④ ③ ② ① Weak Emphasis

The next three ratings refer to relations with people at this college. Again, thinking of your own experience, please rate the quality of these relationships on each of the following seven-point rating scales.

Relationships with other students

Friendly, Supportive, Sense of belonging ⑦ ⑥ ⑤ ④ ③ ② ① Competitive, Uninvolved, Sense of alienation

Relationships with administrative personnel and offices

Helpful, Considerate, Flexible ⑦ ⑥ ⑤ ④ ③ ② ① Rigid, Impersonal, Bound by regulations

Relationships with faculty members

Approachable, Helpful, Understanding, Encouraging ⑦ ⑥ ⑤ ④ ③ ② ① Remote, Discouraging, Unsympathetic

Go to next page

ESTIMATE OF GAINS

Very Little / Some / Quite a Bit / Very Much

Acquiring knowledge and skills applicable to a specific job or type of work (vocational preparation).

Acquiring background and specialization for further education in a professional, scientific, or scholarly field.

Gaining a broad general education about different fields of knowledge.

Gaining a range of information that may be relevant to a career.

Developing an understanding and enjoyment of art, music, and drama.

Broadening your acquaintance with and enjoyment of literature.

Seeing the importance of history for understanding the present as well as the past.

Gaining knowledge about other parts of the world and other people (Asia, Africa, South America, etc.).

Writing clearly and effectively.

Presenting ideas and information effectively when speaking to others.

Using computers and other information technologies.

Becoming aware of different philosophies, cultures, and ways of life.

Developing your own values and ethical standards.

Understanding yourself, your abilities, interests, and personality.

Developing the ability to get along with different kinds of people.

Developing the ability to function as a member of a team.

Developing good health habits and physical fitness.

Understanding the nature of science and experimentation.

Understanding new developments in science and technology.

Becoming aware of the consequences (benefits, hazards, dangers) of new applications of science and technology.

Thinking analytically and logically.

Analyzing quantitative problems (understanding probabilities, proportions, etc.).

Putting ideas together, seeing relationships, similarities, and differences between ideas.

Learning on your own, pursuing ideas and finding information you need.

Learning to adapt to change (new technologies, different jobs or personal circumstances, etc.)

ADDITIONAL QUESTIONS

OTHER ID#
If Requested

1. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
6. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
7. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

8. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
9. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
10. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
11. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
12. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
13. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
14. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

15. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
16. Ⓐ Ⓑ Ⓒ Ⓓ Ⓕ
17. Ⓐ Ⓑ Ⓒ Ⓒ Ⓔ
18. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
19. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
20. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

THANK YOU FOR YOUR PARTICIPATION!

PLEASE DO NOT WRITE IN THIS AREA

526465

APPENDIX D

Perceptions of Mentoring Questionnaire

APPENDIX D

Perceptions of Mentoring Questionnaire

Instruction to Participant: Please indicate your response on page 8 in the "Additional Questions" section of the CSEQ.
This section deals with your perceptions of mentoring.

Mentoring Definitions:
Formal mentoring programs or relationships are those usually structured and initiated by an organization. Normally, these organizations have made a strong commitment to the growth of the individual by placing high value on training and professional development.

Informal mentoring relationships are not structured or managed, nor usually officially recognized by the organization. These relationships are normally spontaneous and occur without external organizational involvement.

Instruction to Participant: Based on the " mentoring definitions" stated above, please indicate your response by filling in the appropriate oval next to the correct answer on CSEQ questionnaire (Page 8), using the following scale:

(a) Very Often   (b) Often   (c) Occasionally   (d) Never

Perceptions of Mentoring
1. Participated in any formal mentoring from faculty at your university?
2. Participated in any formal mentoring within your job?
3. Participated in any formal mentoring from outside organizations, colleagues, or peers?
4. Participated in any informal mentoring from your institution's faculty?
5. Participated in any informal mentoring within your job?
6. Participated in any informal mentoring from outside organizations, colleagues, or peers
7. Feel that mentoring would have a positive impact on your marketability as a professional in your field?
8.Feel that mentoring would allow you to complete your degree sooner?
9. Overall, your universities' climate encourages *formal* mentoring?
10. Overall, your department or universities' climate encourages *informal* mentoring?
11. Feel that your department or institution would benefit from a *formal* mentoring program?
12. If your department or institution adopted a *formal* mentoring program, would you participate?

Background Information
13. What is your classification in college?
a. Masters degree student (less than 12 completed hrs) b. Masters degree student (more than 12 hrs)
c. Doctoral degree student (less than 12 completed hrs) d. Doctoral degree student (more than 12 hrs)
14. Which University are you enrolled?   a. University Group A   b. University Group B   c. University Group C

Thank you for your cooperation and participation.
Don Ciulla

APPENDIX E

Cover Letter to Participant

Title: An assessment of university experiences and mentoring perceptions of health
education graduate students.

Investigator: Don S. Ciulla, MS, PhD Doctoral Candidate. 940-591-5256
Advisor: Susan Ward, PhD, CHES,
           Chair, Department of Health Studies.......................940-898-2843

Welcome:
     You are being asked to participate in a research study for Mr. Don Ciulla's doctoral
dissertation at Texas Woman's University.
     *The purpose of this research is to assess and compare university experiences
and mentoring perceptions of enrolled health education master's and doctoral students.*
     The survey will be conducted during the week of August 28, 2000. I have obtained
approval from the chairperson of the department to administer the questionnaire. The
questionnaire takes approximately 30 minutes. If it is determined by the class instructor
or you that there is not sufficient class time to complete the survey, you may answer the
questionnaire outside of class and mail the completed questionnaire to me in a pre-
addressed postage paid envelope.
     Your participation in this study is voluntary. To maintain confidentiality and
anonymity, your name and institution's name is not required. If at any time, you are
uncomfortable with answering a specific question, you are not required to answer it.
     If you have any questions about the research study, you should ask the researchers:
their phone numbers are at the beginning of this letter. My email address is
dciulla@iglobal.net.
     I want to take this opportunity to thank you in advance for participating in this
research. A summary of the results of this study will be mailed to you upon request.

Respectfully,

Don S. Ciulla, MS

APPENDIX F

Special Instructions to Participant

TEXAS WOMAN'S UNIVERSITY
Denton, Texas
SPECIAL INSTRUCTIONS TO PARTICIPANT
For completion of
College Student Experiences Questionnaire (CSEQ)

Investigator: Don S. Ciulla, MS, PhD Doctoral Candidate. 940-591-5256
Email- dciulla@iglobal.net

1. A few questions on the background information are for undergraduates only. You may ignore these.

2. Do not complete question on Page 2, "What is your classification in college?" It is asked in the supplemental questionnaire enclosed.

3. Those questions that state, "during the current school year", please use the past school year to answer the question.

4. Please remember to fill out the "Additional Questions" separate sheet. Please provide your answers on page 8 under the same title.

5. After completion, seal envelope, and mail the completed questionnaire.

Thank you again for your cooperation and participation.

Don Ciulla