

PERCEPTIONS OF RESEARCH ADMINISTRATORS ON THE VALUE OF
CERTIFICATION

by

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ABSTRACT

The purpose of this study was to determine the perceived value of certification to research administration professionals and demographic characteristics. This study sought to determine whether those who have attained the Certificate in Research Administration (CRA) perceive a benefit to their careers and why most research administrators do not attempt certification. The primary research question studied is concerned with the relationship between perceived value of the CRA to research administration professionals and demographic characteristics.

The survey instrument, *Research Administrator Survey*, was electronically distributed to 277 research administrators based in the Southeast region of the National Council of University Research Administrators (NCURA). A total of 230 surveys were completed and returned for a usable return rate of 83%.

The research revealed that CRAs consistently perceived the value of certification to be greater than non-certified research administrators; however, the majority of both CRAs and non-certified research administrators perception was that becoming certified would, or did, enhance their knowledge as research administrators. Overall, the majority of non-certified research administrators reported that their reason for not attempting certification was that they did not believe there was any benefit to becoming certified, but when all the other reasons for not attempting certification are closely examined, the responses taken as a whole indicate that as many non-certified research administrators may perceive a benefit to becoming certified as those who do not perceive a benefit. In

summary, the data indicated that non-certified research administrators do perceive some benefit to certification.

It is recommended that the Research Administrators Certification Council (RACC) attempt to be more closely aligned with the with National Council of University Research Administrators (NCURA) and the Society of Research Administrators International (SRA) since research administrators report having extremely positive professional development experiences with these organizations. It is further recommended that research be conducted to determine if curriculum at the university level should be developed in research administration management. Finally, it is recommended that NCURA and SRA engage in research to determine how many people are involved in the profession of research administration to help make decisions in regard to continuing adult education.

Dedicated to my sister Sheila

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CHAPTER ONE
PROFESSIONAL CERTIFICATION AND RESEARCH ADMINISTRATION

Introduction

The professional field of research administration faces critical challenges in maintaining and cultivating a talented group of skilled administrators in the new millennium. Universities have created increasingly complex bureaucracies to manage the dramatic rise in research funding and the complicated legal and regulatory requirements associated with receiving funding for research (Hansen & Moreland, 2004). As a result, the number of people employed in the field of research administration has increased.

Certification programs are designed to confirm that individuals in a given profession possess the fundamental knowledge necessary to serve their employer and profession in the best possible manner. Gilley and Galbraith (1986) define certification as the process by which a professional organization or an independent external agency recognizes the competence of individual practitioners. Some professions require specific certification as a condition of employment. For example, there are requirements for certification for teachers in all 50 states (Goddard, 1990). Lawyers are required to pass the bar exam. The bar exam is a test administered by state bar organizations that law school graduates must pass before being licensed to practice law (American Bar Association, 2004). A requirement of some accounting careers is the incumbent of the position being a Certified Public Accountant (CPA) in an attempt to ensure that only

qualified individuals become licensed as Certified Public Accountants (American Institute of Certified Public Accountants, 2004).

Several professions require certification as a condition of employment and others offer opportunities for voluntary certification that serves as an indicator of expertise in a certain area of knowledge. For example, an automotive mechanic does not need to be certified to gain employment in the field, but voluntary certification is offered to illustrate competency in the form of Automotive Service Excellence (ASE) certification (College Tech Prep Youth Consortium, 2004). Computer programmers are not required to achieve certification; however, various certification programs are offered to help those employed in the field gain a potential competitive advantage (United States Department of Labor Bureau of Labor Statistics, 2004). The American Institute for Certified Planners (AICP) offers voluntary certification for land use planners, but such certification is not required to be a land use planner (American Planning Association, 2004). The professional field of research administration is another career that offers voluntary certification.

The professional field of research administration emerged in the late 1950s as a result of several exploratory planning meetings held at various locations across the country and attended by small groups of university administrators who collectively agreed there was a need for an organization to look beyond business and fiscal matters and into the broader aspects of research administration (Wile, 1983). According to Wile, these initial exploratory meetings culminated with a group of five university administrators who met in New York City on October 28, 1959, and served as an organizing committee for the first annual meeting of the National Council of University

Research Administrators (NCURA). The first official meeting of the NCURA was held on January 26, 1960, at the University of Chicago. The meeting minutes showed that 45 persons representing 40 institutions from across the country attended (Wile). At the 2003 annual meeting of NCURA there were 1,702 attendees representing over 400 colleges, universities, and teaching hospitals (National Council of University Research Administrators, 2003).

There is no published estimate of the number of research administrators who are employed in the field around the world. As of November 17, 2004, the NCURA had 4,578 members listed in their active membership database, and reported this number as the highest member count to date (National Council of University Research Administrators, 2004). The NCURA is the first and largest organization dedicated exclusively to the field of research administration.

The Society of Research Administrators International (SRA) was established in 1967 and is another non-profit organization dedicated to serving the profession of research administration (Society of Research Administration International, 2004). As of September 24, 2004, the Society of Research Administrators International reported having 3,619 members. The need for research administrators has increased over the years as evidenced through the evolution of professional organizations dedicated to the field of research administration and by the greater number of research administrators employed at colleges, universities, and teaching hospitals throughout the world.

The Research Administrators Certification Council (RACC) was formed in conjunction with the SRA in 1993. The primary purpose of the RACC was to certify that

an individual, through experience and testing, has the fundamental knowledge necessary to be a professional research or sponsored programs administrator (Research Administrators Certification Council, 2004a). In order to become a Certified Research Administrator an individual must meet minor eligibility requirements, pay a \$295 application fee, and pass an exam that is administered through the Professional Testing Corporation. The RACC offers review sessions to help prepare individuals for the examination. Since the RACC was formed in 1993, approximately 500 research administration professionals have achieved certification (Research Administrators Certification Council, 2005). It is not known whether certification has benefited the careers of those who have achieved it, nor is it known why most research administrators do not attempt certification.

Review of the Literature

Research Administration

Examination of the literature in the field of research administration revealed that no study has been published on the Certificate in Research Administration. In fact, no published study has been conducted focusing on the research administrator.

Raymond Woodrow (1978) asserted that management for research, not of research, was an extremely important concept for research administrators to embrace since provision of a nourishing climate through various support services is necessary to help research thrive at universities. As cited in Woodrow, D. F. Finn, Executive Vice President of the National Association of College and University Business Officers,

proclaimed that the welfare of the nation, and perhaps the world, is critically influenced by the quality of research performed in universities. Major medical, educational, and technological advances have been made as a result of research conducted at universities. While research administrators may not personally engage in the research conducted at universities, their contribution is significant because they provide the support structure for those who are engaged in the research. Woodrow declared that the knowledge that is the product of research today becomes the subject matter of what is taught tomorrow.

Professional Certification

Certification programs in professional fields impact more than just the individual obtaining certification. Gilley and Galbraith (1986) asserted that there are consequences for entire industries. Consequences include the opportunity to enhance the prestige of the given profession through improvement of public image and through communication to the public that the profession has a deep regard for the quality of its members. Studying the perceived impact of certification on any profession can be meaningful to those employed in the specific profession and to related professional organizations. Galey (1980) contended that certification offers a distinct competitive advantage to professional organizations and to specific professions through soliciting and retaining membership. Many professional organizations can represent the interest and scope of a particular profession. The literature illustrates numerous professional organizations and fields that offer, and in some instances require, certification.

Theoretical Framework

Malcolm Knowles (1973) developed a theoretical framework for adult learning known as andragogy, the art and science of helping adults learn. Knowles contrasted andragogy to pedagogy, teaching children to learn, and made four assumptions about the unique nature of adult learners. The first assumption is that adults are self-directed in the planning and evaluation of their learning. A person grows and matures their self-concept from one of total dependency to one of increasing self-directedness. The second assumption is that adults learn through experience. Individuals mature and gain an expanding base of experience that causes them to become an increasingly rich resource for learning. Experience provides a broader base to relate new learning. Third, adults have a readiness to learn. As an individual matures their readiness is decreasingly the product of biological development. Andragogy assumes learners are ready to learn the things they need to because of developmental phases they approach in roles as workers, parents, spouses, organizational members, and the like. The fourth assumption is adults have a problem-centered approach to learning. Adults come to an educational activity largely because they are experiencing some inadequacy and have a desire to apply tomorrow what they learn today.

The importance of adult learning theory to certification of research administration professionals is that it focuses educators on understanding the learners. Creighton, Shaffer, and Blaney (1999) contend that the importance of adult learning theory in the provision of continuing education is gaining recognition, and that continuing education activities must be designed in a manner conducive to adult learning. For professional

certification programs to be optimally effective, they must be designed and delivered in a manner consistent with current knowledge about preferences and characteristics of the adult learners who may take advantage of such certification opportunities. This study will contribute to the literature by offering an analysis of the demographic characteristics of research administration professionals and through examining the relationship between demographic characteristics and perceived value of certification.

Problem Statement

The value of certification in the field of research administration is not known. Research administration professionals do not know whether certification has benefited the careers of those who have achieved it, or why most research administrators do not attempt certification.

The primary research question to be studied is concerned with the relationship between perceived value of the Certificate in Research Administration (CRA) to research administration professionals and demographic characteristics.

Research Questions

1. What is the perception of certified research administrators compared to non-certified research administrators in regard to the value of certification?
2. What is the relationship of demographic characteristics to the attainment of certification?

3. To what extent do certified research administrators attribute their career advancement, self-confidence, and enhanced knowledge of the field to certification?
4. What reasons, if any, do non-certified research administration professionals give for not attempting certification?
5. What relationship, if any, exists between the value placed by certified and non-certified research administrators in a supervisory role when they evaluate the qualifications of applicants for positions in research administration?

Methodology

A survey instrument was developed to collect data from certified research administrators and non-certified research administrators. The survey collected demographic information to help describe the relationship between the demographic characteristics of the population and perception of value. Demographic characteristics include gender, age, years employed in research administration, classification of organization, type of institution, supervisory responsibilities, and professional organization affiliation. In addition, questions pertaining to the perceived value of certification were collected from certified research administrators, non-certified research administrators, and research administrators who serve in a supervisory capacity. Collecting these data helps describe the relationship between each of these groups and the perceived value of certification.

There were four major categories of respondents. For example, the first category of respondents included research administrators who were not certified and who did not serve in a supervisory capacity. Table 1 illustrates the four major categories of respondents and identifies the specific questions each respondent answered.

Table 1
Major Categories of Respondents

| Category | Survey Questions |
|--------------------------------------------------------|--------------------------------------|
| Not certified and do not serve in supervisory capacity | 1-16, 24-25, 26a(1)-26a(8), 27-29 |
| Not certified and do serve in supervisory capacity | 1-16, 24-25, 26a(1)-26a(8), 27-33d, |
| Certified and do not serve in supervisory capacity | 1-16, 16a(1)-16a(8), 17-23 |
| Certified and supervisory | 1-16, 16a(1)-16a(8), 17-23, 29-33(d) |

All respondents were asked a minimum of 29 questions and a maximum of 41 questions. The number of questions answered by a respondent depended upon which of the four major categories the respondent identified with since questions were designed to seek responses from various demographic profiles. It was estimated that it took respondents 4 to 6 minutes to complete the survey.

After the opening set of demographic questions, the respondents were asked if they are a certified research administrator. Respondents who answered yes to this

question answered a set of questions related to the value of becoming certified. For example, data related to career advancement, confidence level, perceived knowledge, and dedication to the profession of research administration were collected. Respondents who answered no to the question were asked some of the same questions, but the primary focus was on determining the reasons that they were not certified research administrators. Respondents who identified themselves as serving in a supervisory capacity were asked an additional set of questions relating to the value they placed on certification.

The survey developed was distributed to respondents via an electronic mail notification and included a link to an Internet site where the survey could be completed on-line. An Internet survey instrument was suitable for this study since all potential respondents had Internet access and electronic mail addresses as provided through their respective employers. Utilizing an Internet survey method was advantageous for several reasons including potential high speed of returns, advantages of computer-assisted data collection, and monetary savings to the researcher (Fowler, 2002). Member lists obtained through the National Council of University Research Administrators, Society of Research Administrators International, and the Research Administrators Certification Council were utilized to create a master list with necessary contact information for the sample population.

Research Type: Population and Sample

Survey questions are provided in Appendix A. The study explored the research questions through quantitative methods of inquiry. The population of respondents for this

study included research administrators based in the Southeastern region of the National Council of University Research Administrators. According to the National Council of University Research Administrators (2005), 1,101 members were based in the Southeastern region.

A list of 501 research administrators who had achieved certification was obtained from the Research Administrators Certification Council, and the list revealed that 147 of the research administrators who achieved certification were from the Southeastern region of the National Council of University Research Administrators. These 147 individuals were selected to represent half of the overall sample population for this study. The other half of the sample population was randomly selected from a list of non-certified members based in the Southeastern region.

The sample population for this study was 297 research administrators based in the Southeast region of the National Council of University Research Administrators. This sample size exceeded the number suggested by Dillman (2000) and Krejcie and Morgan (1970) as an appropriate sample size. Contact information for all potential respondents was checked for accuracy and edited prior to electronically mailing the survey instrument.

Prior to finalizing the Internet survey, two research interviews were conducted to test the applicability of the questions. One cognitive interview was conducted using an interview protocol (Fowler, 2002). The intent of the oral cognitive interview was to improve the instrument design, format, and layout (Dillman, 2000; Fink, 2003; Fowler).

Finally, a pilot study was conducted to determine the survey instrument's work under realistic conditions. A purposeful sample was drawn of research administrators who are not based in the Southeastern region of the National Council of University Research Administrators. The purposeful sample included a minimum of two people from each of the four major categories of respondents.

The survey instrument was distributed electronically, and computer-assisted technology software was utilized to collect the data. The computer-assisted application utilized for administering the Internet survey was Ultimate Survey. The backend database for the survey was Microsoft Structured Query Language (SQL) 2000. The database was able to export data as a comma separated value file, and data were retrieved in an Excel format that was easily transferred to SPSS for statistical application.

In an early effort to improve response rate, an announcement was made at the Southeastern regional business meeting of the National Council of University Research Administrators on November 2, 2004 encouraging participation in the study if selected. The aforementioned business meetings were held each year at the annual national meeting of the National Council of University Research Administrators.

Those who did not respond to the Internet survey were contacted by telephone and personally asked by the researcher to respond to the survey. Upon completion of data collection the data analysis process began. Conclusions were made based on the data collected. All conclusions are presented in aggregate to assure the confidentiality of all respondents.

Data Analysis

The following provides a description of how the researcher analyzed the data collected from the instrument *Research Administrator Survey*. The data analysis was designed to address five key research questions through the three sections of the survey instrument: (a) perceptions of certified and non-certified research administrators, (b) demographics, and (c) perceptions of supervisors on the value of certification.

For Research Question 1, *What is the perception of certified research administrators compared to non-certified research administrators in regard to the value of certification*, the data were disaggregated according to the demographic information of each group. An analysis of variance was performed to analyze the relationship, if any, that exists among the demographic variables and the level of agreement in regard to perceived value. This analysis determined if any particular demographic item, such as years of experience or age, had a significant correlation with any individual's perceptions on the value of certification. Relationships among items related to perceived value and beliefs regarding certification were also examined.

For Research Question 2, *What is the relationship of demographic characteristics to the attainment of certification*, specific characteristics of each respondent were collected to determine whether perception of value was influenced by demographic characteristics.

Research Question 3, *To what extent do certified research administrators attribute their career advancement, self-confidence, and enhanced knowledge of the field to certification*, examines respondent perceptions in terms of specific characteristics

pertaining to value of certification. These responses were compared with how non-certified research administrators reported perceptions of value pertaining to certification.

Research Question 4, *What reasons, if any, do non-certified research administration professionals give for not attempting certification*, determines the specific reasons for this. The response data were analyzed and presented in percentage form for each potential reason.

The perceptions of research administrators who served in a supervisory capacity was the focus of Research Question 5, *What relationship, if any, exists between the value placed by certified and non-certified research administrators in a supervisory role when they evaluate the qualifications of applicants for positions in research administration*. This question examined the degree of preference that supervisors give to applicants for research administration positions who have achieved certification.

Table 2 provides a matrix detailing the purpose of each survey question and associates each question with a research focus and research question.

Table 2

Matrix for Survey Questions

| Purpose | Research Focus | Research Question |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------|
| Survey questions 1-13 Demographic data | Determine if differences exist among groups | 2 |
| Survey question 13a Demographic data | Determine degree of satisfaction with NCURA sponsored professional development activities | 2 |
| Survey questions 14-14a Demographic data | Determine degree of satisfaction with SRA sponsored professional development activities | 2 |
| Survey questions 15-16 Demographic data | Research Administrator Certification Council | 2 |
| Survey questions 16a-28 Perceptions of certified and non-certified research administrators | Determine perceived value of certification to each group | 1,3,4,5 |
| Survey questions 29-33d Perceptions of supervisors | Determine degree of preference supervisors place on certification when evaluating applicants for positions | 1,5 |

Delimitations and Limitations

The study was delimited to research administrators based in the Southeastern region of the United States as defined by the National Council of University Research Administrators. The researcher who engaged in this research was well known in the Southeastern region of the National Council of University Research Administrators due to previously held leadership positions attained as a result of membership voting,

presentations made at various meetings, and participation in numerous other activities involving Southeastern regional membership. It was anticipated that response rate to the Internet survey would likely yield the best results if the aforementioned population was utilized. An additional delimitation pertained to the half of the sample population that has achieved certification because in order to be included in this proposed study the Certified Research Administrator must have achieved certification prior to February 1, 2005.

This study was limited since it was assumed respondents would answer the Internet survey questions honestly. In addition, the sample population included individuals who have changed jobs, moved, retired, died, or otherwise not have been employed in the profession of research administration. Furthermore, the accuracy and currency of the records obtained from the National Council of University Research Administrators, Society of Research Administrators International, and Research Administrators Certification Council could not be controlled.

Significance of the Study

No research was available concerning the value of research administrators becoming certified through the Research Administrators Certification Council. There have been no doctoral studies completed that have examined the relationship of career development and status as a certified research administrator.

This study will help to determine to what degree research administration professionals value certification, and will help in determining the perceived value of certification to different groups of research administrators. Examining the relationship

between demographic characteristics and perception of value will help explain who research administrators were, how they came to the profession, and how different groups of research administration professionals felt about certification. Information about the type of institution an individual was employed at will help make distinctions between the different types of universities and certification. The perceived degree of benefit to achieving certification will help in determining the value of becoming certified. Identifying reasons why the majority of research administrators do not attempt certification will help professional organizations better understand preferences and characteristics of members. Determining the degree of preference that supervisors give to applicants for research administration positions who have achieved certification will help explain the value those serving in a supervisory capacity place on certification.

Additionally, this study will provide information to research administrators worldwide and to professional organizations dedicated to research administration that will assist them in a number of ways. First, the study could encourage research administrators to attempt certification if achieving certification is found to have positive value. The profession of research administration could be improved if more research administrators achieved certification, and especially if it is found that achieving certification leads to more knowledgeable research administration professionals. A sense of commitment to the profession could be reinforced and potentially lead to improved candidates for positions. Universities could benefit from having more knowledgeable research administration professionals on their campuses. Professional organizations could benefit as decisions related to education and training could be impacted by the results of

this study. In addition, demographic information describing the research administrator will help in explaining who research administrators were.

Conversely, decisions research administrators and related professional development organizations make could be influenced by the analyzed data. It could help research administrators seek more meaningful avenues for professional development, and it could help professional organizations develop more meaningful professional development programs in line with the preferences of the potential participants. Research administrators can be more certain about the value of achieving certification. Additionally, information as to why the majority of research administrators do not attempt certification is provided. This information could assist the Research Administrators Certification Council and other professional organizations in developing more meaningful professional development programs for their members.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

Obtaining professional certification is a phenomenon that professional associations and employers have increasingly used to determine competence of individuals in various fields of employment (Barnhart, 1994; Knapp & Gallery, 2003; National Certification Commission, 2005; Robertson, 1999). In order to understand how and why professional certification came into being, this review of the literature will explore the history of credentialing and define professional certification. A great deal of confusion exists in regard to various credentialing related terms because they are often erroneously used interchangeably (Bratton & Hildebrand, 1980; Galbraith & Gilley, 1986; Parker & Smith, 2004; Penland, 1982). In order to assuage this confusion, subtle yet important differences in credentialing related terminology will be explained.

The literature reveals both potential advantages and disadvantages to attaining professional certification for practitioners, employers, and professional associations. Both positive and negative implications will be explained.

The professional field of research administration is one of many professional fields that offer a voluntary certification. Since the research questions in this study investigate the relationship between perceived value of certification to research administrators and demographic characteristics, this review of the literature will focus on the professional field of research administration.

History of Credentialing

Accreditation, licensure, and certification are all terms used to describe credentialing activities. These terms are often erroneously used interchangeably since they all fall under the general category of credentialing (Bratton & Hildebrand, 1980). Historically, credentialing has been developed by professions which offered a unique service in order to protect the public from incompetent practitioners (Galbraith & Gilley, 1986). The earliest recollections of credentialing procedures in the West can be traced back to the 13th century and Frederick II, Emperor of the Holy Roman Empire, who was behind the creation of the first medical credentialing practice (Ludwig, 1991). During this same period, the early church served as the European education-credentialing agency to assure religious beliefs were incorporated in educational activities (Galbraith & Gilley, 1985).

In the United States, credentialing arose from the professional fields of medicine, law, and teaching (Ludwig, 1991). The Commonwealth of Virginia instituted the first medical licensure program in 1639 (Galbraith & Gilley, 1985). Griffith and Marcus (1978) reported that in 1730 the legal profession began a credentialing process in the colony of New York through the establishment of an apprenticeship program required of lawyers before permitting them to argue cases before the court. The first known certification programs in the United States were affiliated with the church in order to guarantee that schoolmasters maintained orthodox religious beliefs (Haggett & Stinnett, 1956).

In early America, credentialing was associated with the interests of the wealthy, which included the aristocracy of Europe, the church, and the commercial class in America (Reiff, 1974). Because of the restrictive nature of early credentialing efforts, only the upper classes were permitted to engage in select occupations such as medicine and law (Galbraith & Gilley, 1986). In the mid-nineteenth century a move to deregulate the medical and legal professions was under way (Ludwig, 1991). These changes were enacted because people viewed professions as monopolies that restricted free trade, blocked the entry of lower classes, and restricted individual freedoms (Gross, 1978). As a result of this movement, numerous incompetent and poorly trained individuals were able to enter the medical and legal professions (Galbraith & Gilley, 1986). Gross asserts that professional organizations began promoting the relationship between competencies and credentialing, and this coupled with congressional authorization of the Interstate Commerce Commission in 1887 began a new era in protecting consumers from incompetence through credentialing.

Soon after World War II, the National Education Association began a professional standards movement. The purpose of this movement was to improve and standardize existing educational programs. These efforts resulted in teacher certification programs in every state by 1960 (Galbraith & Gilley, 1986). Since 1960 federal and state governments have attempted to ensure high standards of teacher preparation, to improve the certification process, and to establish uniform requirements for teachers.

The National Board for Professional Teaching Standards was established in 1987 as an independent non-profit organization to advance the quality of teaching and learning

through maintaining high and rigorous standards for what accomplished teachers should know (National Board for Professional Teaching Standards, 2005). The organization is governed by a board of directors, the majority of whom are classroom teachers, and has offered National Board Certification to teachers for the past decade. National Board Certification for teachers is voluntary and is different from other types of teacher education certifications that in many instances are required, and essentially serve as a license, to teach in public schools.

Although no formal statistics are available in regard to the number of professional certification programs in existence, certification experts believe that several thousand professional certification designations are currently offered within the United States, and that the number is growing rapidly (Knapp & Gallery, 2003). Robertson (1999) reports that employers are resorting in increasing numbers to formal certification testing as a method of ascertaining individual competence and potential in the workplace.

The National Certification Commission (2005) was established in 1993 and provides information and assistance to associations on the development and improvement of certification programs in numerous occupations and professions. Members consist of 150 organizations with over 300 certification designation categories. Knapp and Gallery (2003) reported that the National Organization for Competency Assurance is a membership organization for certifying bodies with over 300 members representing over 6 million individuals holding certification in some area of specialization. Barnhart (1994) identified over 600 different professional certification programs encompassing over 20 professional fields.

In summary, the history of credentialing illustrates to us how various forms of credentialing evolved. It is important to distinguish between the various forms of credentialing since they impact various professions in different ways. Since the focus of this study is on professional certification, this review of the literature defines professional certification and makes distinctions between certification, accreditation, and licensure.

Defining Professional Certification

Certification programs are designed to confirm that individuals in a given profession possess the fundamental knowledge necessary to serve their employer and profession in the best possible manner. Galbraith and Gilley (1985) defined certification as a voluntary process by which a professional association or organization measures the competencies of individual practitioners. Some professions require specific certification as a condition of employment. For example, there are requirements for certification for teachers in all 50 states (Goddard, 1990). Lawyers are required to pass the bar exam. The bar exam is a test administered by state bar organizations that law school graduates must pass before being licensed to practice law (American Bar Association, 2004). A requirement of some accounting careers is that the incumbent of the position being a Certified Public Accountant (CPA) in an attempt to ensure that only qualified individuals become licensed as Certified Public Accountants (American Institute of Certified Public Accountants, 2004).

Several professions require certification as a condition of employment, and others offer opportunities for voluntary certification that serves as an indicator of expertise in a

certain area of knowledge. For example, an automotive mechanic does not need to be certified to gain employment in the field, but voluntary certification is offered to illustrate competency in the form of Automotive Service Excellence (ASE) certification (College Tech Prep Youth Consortium, 2004). Computer programmers were not required to achieve certification; however, various certification programs were offered to help those employed in the field gain a potential competitive advantage (United States Department of Labor, Bureau of Labor Statistics, 2004). The American Institute for Certified Planners (AICP) offers voluntary certification for land use planners, but such certification is not required to be a land use planner (American Planning Association, 2004). The professional field of research administration is another career that offers voluntary certification.

There is often a great deal of confusion associated with the term certification. For example, Bratton and Hildebrand (1980) emphasize that professional certification should not be confused with teacher education certification because the term teacher certification is a misnomer. Instead, it is a licensing mechanism regulated by a local body. Since teachers are required to hold a valid certificate in order to teach in the public school system, the teacher education certification is, in reality, a license to teach. Parker and Smith (2004) report that processes established for certifying and licensing practitioners share important credentialing related commonalities, but the primary difference often misunderstood is that licensure is mandatory and certification is voluntary. Galbraith and Gilley (1985) contend this confusion biases many educators regarding the certification issue and narrows the examination and discussion of professional certification. Penland

(1982) asserts that this confusion has resulted in misunderstanding and frustration on the part of those concerned with the topic of professional certification and has impeded communication. Galbraith and Gilley (1985) maintain that certification, licensure, and accreditation each attempt to regulate the measurement of competencies, however; the methodology, population, and purposes of regulations differ. For example, in McCue (2003), Schoon and Smith indicated that licensure is the granting of a license by a governmental body to practice a profession, while certification is thought of as a means of promoting achievement within a discipline. Certification is not a property right to practice a profession; instead, it is a voluntary achieved standard of excellence for an individual.

According to Bratton and Hildebrand (1980) certification is often perceived as being the same as accreditation and licensure. Distinctions between certification, accreditation, and licensure need to be recognized in order to place professional certification in correct context and avoid confusion in use of terminology. Table 3 provided by Bratton and Hildebrand (1980, p. 23) offers a succinct comparison of accreditation, licensure, and certification.

Table 3

Comparison of Accreditation, Licensure, and Certification

| Type of Credential | Recipient of Credential | Credentialing Body | Required or Voluntary |
|--------------------|-------------------------|--------------------|-----------------------|
| Accreditation | Programs | Association/Agency | Voluntary |
| Licensure | Individuals | Political Body | Required |
| Certification | Individuals | Association/Agency | Voluntary |

Bratton and Hildebrand (1980) offer the following definitions to help clarify the distinctions between certification, accreditation, and licensure.

Certification – the process by which a professional organization or an independent external agency recognizes the competence of individual practitioners.

Accreditation – the process whereby an agency or an association grants public recognition to a school, college, or university, or specialized study program that meets certain predetermined qualifications or standards.

Licensure – a mandatory legal requirement for certain professions in order to protect the public from incompetent practitioners. Licensing procedures are generally established or implemented by a political governing body that prescribes practice without a license.

According to various authors (Bratton & Hildebrand, 1980; Galbraith & Gilley, 1986; Mason, 1984; McCue, 2003) certification is a voluntary achieved standard of excellence for an individual practitioner recognized by a peer group. The focus of this

study falls under this category of credentialing identified in the literature as professional certification.

Advantages of Professional Certification Programs

Several advantages of professional certification programs are identified in the literature. Galbraith and Gilley (1986) reported five primary positive implications of professional certification. These five positive implications to achieving professional certification are commonly cited advantages throughout the related literature. In fact, professional certification programs in several different fields cite as their primary purpose many of the same advantages reflected in the literature.

Enhancement of the Profession

Certification programs in professional fields impact more than just the individual obtaining certification. Gilley and Galbraith (1986) asserted that there are consequences for entire industries. Consequences include the opportunity to enhance the prestige of the given profession through improvement of public image and through communication to the public that the profession has a deep regard for the quality of its members. Professional certification provides structure of the profession's mission, and the image of the profession is positively enhanced in the eyes of the public. Professions could benefit from establishing certification programs to avoid imposed governmental regulations (Gilley & Galbraith).

Galey (1980) contends that certification offers a distinct competitive advantage to professional organizations and to specific professions through soliciting and retaining membership. Many professional organizations can represent the interest and scope of a particular profession. Knapp and Gallery (2003) indicated that certification programs have put many associations on the map and have established themselves as the standard bearers of their profession or industries.

Identification and Improvement of Competencies

Galbraith and Gilley (1986) indicate that the significance of professional certification for practitioners can be realized in the improvement of their performance through the advancement of identified competencies. As a result, self-worth and self-concept are enhanced, in turn providing practitioners with greater confidence and self-satisfaction in the tasks they perform. In Gilley and Galbraith (1986), St. John indicates that regardless of the value of the professional certification itself, candidates for certification are required to increase their own knowledge and their ability in their field of endeavor. This emphasis on self improvement and education is satisfying to the individual, valuable to the employer, and ultimately increases the quality of services to everyone involved. Jonen and Griffith (1998) report that professional certification programs can help prepare individuals for higher-level job responsibilities and gain a more thorough understanding of their profession.

Recognition for Practitioners

Lee (1998) asserted that pursuit of professional certification is a good career investment for individuals because attaining certification is confirmation that an individual meets minimum standards and therefore can help employers weed out unqualified applicants for positions. In Muller (1993), Trisha Neff, executive director of the American Society of Transportation and Logistics, indicated that being certified by a professional organization is evidence to your employer that you are dedicated to your profession. Adams, Brauer, Karas, Bresnahan, and Murphy (2004), reported that achieving certification is one of the most significant ways to gain respect within an organization or professional field. People who are professionally certified have made the effort and taken the risk of having their knowledge tested by peers, thus demonstrating their dedication to the field. According to Hale (2003), being professionally certified positively reflects an individual's commitment to themselves, the profession they serve, and the clientele they serve. Galbraith and Gilley (1985) asserted that professional certification provides positive recognition of some qualifying level of competency, which in return allows the public and the profession to make some distinctions between those who are qualified and those who are not. Galbraith and Gilley (1986) elaborated on this assertion indicating that the prestige associated with obtaining certification may provide incentives for practitioners to strive for levels of excellence that they may not have previously considered valuable.

Increased Earning Potential

Galbraith and Gilley (1986) reported that since practitioners are recognized as being highly qualified and competent as a result of achieving professional certification, they are able to increase their earning potential for the types of services they provide. Since a variety of credentialing related programs were initiated to provide assurance to the general public that practitioners were qualified and competent, it only makes sense to assume the general public, given a choice, would prefer a credentialed service provider over a non-credentialed provider. This recognized level of achievement would make the credentialed candidate more attractive to potential employers, more marketable, and therefore increase their earning potential.

Earning potential may also be increased for professional organizations. Knapp and Gallery (2003) reported that professional certification programs often fuel the demand for various association professional development products such as continuing education programs, training programs, books, and other publications. In order for individuals to maintain their professional certification status, there were often requirements to attend various professional association meetings, workshops, and symposia. Participation in these activities would contribute toward the earning potential of professional organizations.

Standardization of the Profession

Galbraith and Gilley (1986) indicated that perhaps the most important aspect of professional certification for practitioners is that the expectations of the profession are

clearly identified. This enables practitioners to perform their roles and tasks within the profession more effectively.

Galbraith and Gilley (1985) asserted that certification enables the profession to present a valid and reliable approach to the identification of qualified practitioners to employers and to the general public.

American Camping Association Study

In 1993, the American Camping Association National Certification Board conducted a survey of 900 American Camping Association members to ascertain their opinions about the benefits of certification in general (Asterilla & Cox, 1994). Both certified and non-certified camp professionals were surveyed. Contrary to the expectation that there might be a sizable disparity between how certified professionals and non-certified professionals valued certification, the two groups strongly agreed on the major benefits of American Camping Association professional certification. The benefits of professional certification as cited in the study include the following:

1. Professional certification results in professionals being better able to meet and serve their clients' needs.
2. Certification increases feelings of competence.
3. Professional certification increases the number of contacts or networking opportunities.
4. Certification increases a professional's potential job mobility.

5. The learning necessary for professional certification gives great personal satisfaction.

6. Certification increases the self-esteem of professionals.

In summary, the literature revealed numerous positive implications to professional certification programs for practitioners. Advantages for professional organizations and industries as a whole were also identified. Despite advantages to both practitioners and entire industries, several disadvantages of professional certification were also identified in the literature.

Disadvantages of Professional Certification Programs

While certification programs have increasingly been a popular trend for practitioners, professional associations, and industry, there was little evidence that professional certification equates to competence, or that certification programs were even necessary at all. The literature revealed several negative implications of professional certification.

Glassie (2003) asserted certification can only measure factors that tend to indicate competence. There was little definitive evidence on whether certification equated to competence. Glassie maintained that certification was only one factor in measuring competence, and it was by no means the determining factor. It was undeniable that many professionals were recognized as experts in their given profession even though they were not certified. Goldhaber and Anthony (2003) pointed to several teacher education studies that concluded certification did not necessarily translate to better or more competent

teachers. In Goldhaber and Anthony, Walsh reported on a review of approximately 150 studies on teacher certification concluding that certified teachers are not necessarily more effective than uncertified teachers. In summary, one disadvantage to certification was that certification itself did not necessarily equate to competence or make for better practitioners in a given professional field.

Gilley (1996) asserted that there may not even be a need for many professional certification programs. A common argument for professional certification programs was that they exist to protect the public from incompetent practitioners, but in many instances it was not clear what the public was being protected from. For example, does the public need to be protected from incompetent data processors, appraisers, or research administrators? All of these fields offer professional certification, but it was not clear what the public was being protected from, or if the public even needed to be protected.

Galbraith and Gilley (1986, p. 30) identified several negative implications of professional certification programs. They include:

1. Division among professionals and profession.
2. Identifying core competency areas.
3. Evaluation of applicants to identify measurable standards.
4. The financial and human costs associated with the professional certification.
5. Regulation of the profession.

Division Among Professionals and Profession

Since many professional fields are diverse in nature and encompass widespread areas of specialization, professional certification could potentially widen the gap between practitioners who debate the worthiness of topics to include in professional certification programs. Galbraith and Gilley (1986) indicated that professional organizations may discover that certain groups within their organization may withdraw membership and potentially establish independent associations that meet their specific needs. Such actions could fragment the profession and lead to several ineffective groups attempting to address needs that they feel are most important. Creation of such independent groups would defeat the purpose of serving the overall organizational membership.

Core Competency Identification

Since professional organizations and the industries behind the professional organizations are made of individuals, there are more than likely to be differences of opinion in terms of core competency identification for professional certification. Identifying the core competencies can be an extremely demanding task that includes identifying, defining, and measuring competencies for each role or job held by practitioners. Galbraith and Gilley (1986) asserted that developing an appropriate level of emphasis for each identified competency can add further confusion to the matter at hand. In Galbraith and Gilley (1985), James suggests that core knowledge and skill sets for professional fields that encompass widespread areas of specialization cannot be identified

adequately and that the level of competence that is to be required for certification cannot be established.

Applicant Evaluation

Galbraith and Gilley (1986) indicated that the professional certification process may become more complex when making a determination about who in the given profession was able to establish measurable standards by which to evaluate applicants. Selecting appropriate and comprehensive qualification criteria can be a difficult task. For example, should experience in the profession be used as a criterion, and if so should experience be based on number of years in the field, type of experience, or both? Since some professions require a diverse set of skills and knowledge base, it may be difficult to identify practitioners with a comprehensive enough knowledge base to evaluate measurable standards for the given professional field.

Financial and Human Costs

Establishing a professional certification program can be expensive in terms of both financial cost and human capital. Galbraith and Gilley (1986) identify several potential costs:

1. Recruitment and selection of qualified certification specialists.
2. Construction and design of valid and reliable tests that require lengthy and costly preliminary studies.

3. Costs associated with the administration of the professional certification program.
4. Costs associated with maintaining the professional certification program.
5. Promotion and marketing costs of the certification program.

In addition to the financial concerns associated with the development and operation of the certification program itself, there are also financial considerations in terms of those who are certified or who are contemplating certification. According to Asterilla and Cox (1994), results of an American Camping Association certification study revealed that respondents overwhelmingly believed that achieving certification did not have an impact on their annual salaries. The respondents were motivated by their own desire to better serve clients, rather than financial considerations. Robertson (1999) asserts that creating meaningful and cost-effective reward schemes for those who achieve certification can be challenging.

Regulation of Profession

Galbraith and Gilley (1985) indicated that professional certification can be negatively viewed as a gatekeeping activity for the profession. The entry of qualified professionals can be severely limited, which increases the responsibility of existing practitioners to carry out the missions set forth by the given profession (Galbraith & Gilley, 1986). Conversely, the quality of the profession may not be improved as a result of restricting entry to practitioners. Even when entry is not restricted, many professionals that are recognized as competent by peers, clients, customers, or institutions may have

simply decided to not pursue professional certification. In short, virtually no professional certification program is able to capture one hundred percent of its potential market (Glassie, 2003).

In summary, despite the dramatic increase in professional certification offerings and the many reported advantages to professional certification programs, there are still negative implications that should not be ignored.

Professional Field of Research Administration

Prior to World War II, extensive scientific research at colleges and universities was minimal with the exception of agriculture related research initiatives that were funded by the federal government and managed by individual scientists (Beasley, et al., 2000). As World War II became imminent, university and industrial scientists were organized to apply their scientific and engineering expertise to the war effort. In 1941, President Franklin D. Roosevelt appointed Dr. Vannevar Bush as director of the Office of Scientific Research and Development (OSRD). Bush was a distinguished scientist who coordinated much of the scientific research that took place during World War II. He is credited with laying the groundwork for the establishment of the National Science Foundation. Bush argued that the federal government should significantly invest in science and ensure free rein of investigation by scientists into topics of their choice. These influential sentiments were paramount to the expansion of research and development activities at colleges and universities throughout the United States. After World War II research activities at colleges and universities began to steadily increase.

External support for research in higher education institutions grew exponentially during the 1950s and 1960s (Spriesterbach, 1975). As research at colleges and universities expanded, so did the need for techniques and procedures to manage the academic research enterprise. Colleges and universities were forced to pay more attention to the development of mechanisms for identifying funding sources, developing and submitting proposals, receiving awards, monitoring expenditures, and submitting reports to various sponsoring agencies. The professional field of research administration was born, and research administrators began to be commonplace on college and university campuses across the country.

Raymond Woodrow (1978) asserted that management for research, not of research, is an extremely important concept for research administrators to embrace since provision of a nourishing climate through various support services is necessary to help research thrive at universities. D. F. Finn, Executive Vice President of the National Association of College and University Business Officers (as cited in Woodrow, 1978), proclaimed that the welfare of the nation, and perhaps the world, is critically influenced by the quality of research performed in universities. Major medical, educational, and technological advances have been made as a result of research conducted at universities. While research administrators may not personally engage in the research conducted at universities, their contribution is significant because they provide the support structure for those who are engaged in the research. Woodrow declared that the knowledge that is the product of research today becomes the subject matter of what is taught tomorrow.

National Council of University Research Administrators

The formalization of the professional field of research administration began in the late 1950s as a result of several exploratory planning meetings held at various locations across the country and attended by small groups of university administrators who collectively agreed there was a need to look beyond business and fiscal matters and into the broader aspects of research administration (Wile, 1983). According to Wile, these initial exploratory meetings culminated with a group of five university administrators who met in New York City on October 28, 1959, and served as an organizing committee for the first annual meeting of the National Council of University Research Administrators. The first official meeting of the National Council of University Research Administrators was held on January 26, 1960, at the University of Chicago. The meeting minutes showed that 45 persons representing 40 institutions from across the country attended (Wile). At the 2003 annual meeting of National Council of University Research Administrators, there were 1,702 attendees representing over 400 colleges, universities, and teaching hospitals (National Council of University Research Administrators, 2003).

There is no published estimate of the number of research administrators who are employed in the field around the world. As of November 17, 2004, the National Council of University Research Administrators had 4,578 members listed in their active membership database and reported this number as the highest member count to date (National Council of University Research Administrators, 2004). The National Council of University Research Administrators is the first and largest organization dedicated exclusively to the field of research administration.

Society of Research Administrators International

The Society of Research Administrators International was established in 1967 and is another non-profit organization dedicated to serving the profession of research administration (Society of Research Administration International, 2004). As of September 24, 2004, the Society of Research Administrators International reported having 3,619 members. The need for research administrators has increased over the years as evidenced through the evolution of professional organizations dedicated to the field of research administration and by the greater number of research administrators employed at colleges, universities, and teaching hospitals throughout the world. The Research Administrators Certification Council (RACC) was formed in conjunction with the Society of Research Administrators International in 1993.

Research Administrators Certification Council (RACC)

The RACC was an independent non-profit organization composed of research administrators. The primary purpose of the RACC was to certify that an individual, through experience and testing, has the fundamental knowledge necessary to be a professional research or sponsored programs administrator (Research Administrators Certification Council, 2004b). The Professional Testing Corporation (2005, p. 1), working in conjunction with the RACC, reported the following three purposes for achieving certification:

1. To provide documented evidence to a current or potential employer that the individual has been examined by an independent professional organization and found to have the basic knowledge that the organization believes is essential to fulfill the responsibilities of a research or sponsored programs administrator.

2. To provide the individual with the satisfaction of meeting independently established criteria that indicate the attainment of a level of basic knowledge necessary to be a professional in the field of research and sponsored programs administration.

3. To indicate to one's peers that the individual has taken the time and effort, beyond job experience, to learn the body of knowledge, thus exhibiting a significant commitment to working in the profession of research or sponsored programs administration.

The body of knowledge identified by the RACC included four primary broad subject areas: project development and administration; legal requirements and sponsor interface; financial management; and general management. Each of these broad content areas is elaborated on in significant detail on the RACC Web page. Reference material, sample tests, review sessions, and mentors are available through RACC to help prepare candidates for taking the required test.

In order to become a Certified Research Administrator candidates must meet eligibility requirements and pass an examination developed by the RACC and administered by the Professional Testing Corporation (Research Administrators Certification Council, 2005). In order to be eligible to take the exam a candidate must

meet one of the three following eligibility criteria (Professional Testing Corporation, 2005, p. 1):

1. A Master's degree with a specialization in research administration or sponsored programs.
2. A Bachelor's degree plus three years of substantial involvement in research or sponsored programs administration either in a sponsoring or recipient organization or the equivalent in a self-funded organization.
3. An Associate's degree and six years of experience, or eight years of substantial experience in the research and sponsored program administration field may be substituted for the Bachelor's degree.

Exceptions to the aforementioned eligibility requirements may be granted upon petitioning the RACC (Research Administrators Certification Council, 2005). The application fee to take the Certificate in Research Administration (CRA) exam is \$295. Certification is valid for 5 years. At the end of each five-year period, individuals must apply for recertification and pay a \$175 application fee to continue using the designation of CRA. A minimum of 40 hours of related continuing education activity is required in order to maintain certification (Research Administrators Certification Council, 2005).

Since the Research Administrators Certification Council was formed in 1993, a total of 501 research administration professionals have achieved certification (Research Administrators Certification Council, 2005). According to statistics provided by the Professional Testing Corporation through the RACC, there is a 71% pass rate. There is

some discrepancy between the 474 people the Professional Testing Corporation report as achieving certification, and the 501 people reported by the RACC as having earned a Certificate in Research Administration (Research Administrators Certification Council, 2005). It is not evident in any of the literature as to what accounts for this discrepancy.

Examination of the literature in the field of research administration reveals that no study has been done on the CRA. It is not known whether certification has benefited the careers of those who have achieved it, nor is it known why most research administrators do not attempt certification.

Summary

Professional certification is a voluntary process by which a professional association or organization measures the competencies of individual practitioners (Galbraith & Gilley, 1985). The term professional certification is often misused and is often confused with other credentialing terms such as accreditation and licensure. Professional certification programs have become increasingly popular, despite the literature revealing both positive and negative implications of such programs.

The professional field of research administration initially began as a result of increased federal dollars being awarded to colleges and universities for research. The field became increasingly popular and more formally recognized with the first annual meeting of National Council of University Research Administrators on January 26, 1960 at the University of Chicago. It is not known how many research administrators there are

around the world, but based on professional organization membership and other indicators or growth, the number is certain to be into the thousands.

The RACC was established in conjunction with the Society of Research Administrators International in 1993 and began offering the CRA at that time. 501 research administrators have achieved certification since 1993, but it is not known as to whether certification has benefited the careers of those who have achieved it, nor is it known why most research administrators do not attempt certification. This study will help to determine to what degree research administrators value certification and will help in determining the perceived value of certification to different groups of research administrators.

CHAPTER THREE

METHODOLOGY AND PROCEDURES

Introduction

This chapter describes the methodology and procedures used to determine the perceptions of research administrators on the value of certification. Collection and analysis processes of survey data are included.

Problem Statement

The value of certification in the field of research administration is not known. Research administration professionals do not know whether certification has benefited the careers of those who have achieved it or why most research administrators do not attempt certification.

The primary research question studied was concerned with the relationship between perceived value of the Certificate in Research Administration (CRA) to research administration professionals and demographic characteristics.

Population and Sample

The population of respondents for this study included research administrators based in the Southeastern region of the National Council of University Research Administrators (NCURA). According to the NCURA (2005), 1,101 members were based in the Southeastern region.

A list of 501 research administrators who achieved certification was obtained from the Research Administrators Certification Council (RACC), and the list revealed that 147 of the research administrators who achieved certification were from the Southeastern region of the NCURA. These 147 individuals were selected to represent half of the overall sample population for this study. The other half of the sample population was randomly selected from a list of non-certified members based in the Southeastern region.

The list of certified research administrators provided by the RACC only included the names, affiliation, and city of the individuals. In order to obtain complete contact information for the certified research administrators, further research was necessary as RACC did not readily provide complete contact information upon request. NCURA and SRA membership databases were utilized in an attempt to find complete contact information for the 147 certified research administrators based in the Southeast region of the NCURA. A search of these two sources revealed contact information for 84 of the 147 certified research administrators based in the Southeast region of NCURA. A search of university Web sites provided the necessary contact information for 34 additional individuals. Contact information for the remaining 29 individuals was obtained through Internet searches, telephone calls, and through contacting individuals known to the researcher who were affiliated with the same organization as the CRA. Contact information was verified, edited, and resulted in a final count of 134 certified research administrators based in the Southeast region of NCURA. Table 4 provides a summary of

the contact list and status of potential respondents who were certified research administrators based in the Southeast region of NCURA.

Table 4
CRA Sample Population Status

| Number of Potential Respondents | Status |
|---------------------------------|------------------------------------------------|
| 134 | Verified willing participants |
| 4 | Retired |
| 4 | No longer in field of research administration |
| 2 | Unable to locate |
| 1 | Refused to participate |
| 1 | On extended leave and asked to not participate |
| 1 | Deceased |

The list of 1,101 research administrators based in the Southeast region of NCURA was used to draw a random sample of 147 non-certified research administrators. Sixty-eight (68) of the individuals included in the list of 1,101 were deleted since they were already included in the certified research administrator sample population. The researcher of this dissertation was also deleted from the list of 1,101, leaving a total 1,032 non-certified research administrators based in the Southeast region of the NCURA to draw a random sample of 147 from. Table 5 provides a summary of the outcome of the first

random sample of non-certified research administrators based in the Southeast region of NCURA.

Table 5

Non-Certified Research Administrator Random Sample Number One

| Number of Potential Respondents | Status |
|---------------------------------|-------------------------------------------------------------------------------|
| 126 | Verified willing participants |
| 7 | No longer with designated institution and left no forwarding information |
| 7 | Unresponsive |
| 3 | Retired |
| 2 | No longer in research administration |
| 1 | Was included on the certified research administrator list (Last name changed) |
| 1 | Refused to participate |

Since there were more non-certified research administrators based in the Southeast region of NCURA to draw a random sample from, a second random sample of 21 was drawn in an effort to identify more respondents. The list the second random sample of 21 was drawn from was narrowed to 885 after the 147 from the first random sample were eliminated from the list. The second random sample resulted in 17 additional potential respondents that could be verified. Of the remaining 4 individuals identified in the second random sample, 2 could not be located, and 2 were unresponsive.

Contact information was verified, edited, and resulted in a final count of 143 non-certified research administrators based in the Southeast region of NCURA.

A total of 277 potential respondents comprised the overall sample population for this study. One-hundred thirty-four (134) were identified as certified research administrators, and 143 were identified as non-certified research administrators. Each potential respondent was contacted by telephone or e-mail and notified that this study was in progress. Confirmation of contact information for all potential respondents was checked for accuracy and edited as necessary.

A third random sample of 5 was drawn from the list of non-certified research administrators after an unusual situation arose subsequent to the initial distribution of the survey instrument. One of the potential respondents indicated it was the policy of that particular institution to receive Institutional Review Board approval for any study involving students or employees of that institution. Despite already having obtained the appropriate Institutional Review Board approval, the researcher was asked to refrain from sending additional surveys to students or employees of that particular institution unless Institutional Review Board approval from that particular institution was obtained for this study. Considering this highly unusual circumstance the researcher elected to draw a third random sample of 5 since all the potential respondents from this institution were non-certified research administrators who could be replaced. One individual from this particular institution had already freely responded to the initial survey invitation, so their response was maintained. The researcher complied with the unusual request from this institution by not resending the survey to any potential respondent from that institution.

Contact information for all 5 of the potential respondents from the third random sample were verified, notified of the study, and identified themselves as willing participants in the study after being contacted by the researcher.

Instrumentation and Data Collection

A survey instrument was developed to collect data from certified research administrators and non-certified research administrators. The survey collected demographic information to help describe the relationship between the demographic characteristics of the population and perception of value. Demographic characteristics included gender, age, years employed in research administration, classification of organization, type of institution, supervisory responsibilities, and professional organization affiliation. In addition, questions pertaining to the perceived value of certification were collected from certified research administrators, non-certified research administrators, and research administrators who serve in a supervisory capacity. Collecting this data helps describe the relationship between each of these groups and the perceived value of certification.

All respondents were asked a minimum of 29 questions and a maximum of 41 questions. The number of questions answered by a respondent depended upon which of the four major categories the respondent identified with since questions were designed to seek responses from various demographic profiles.

The survey developed was distributed to respondents via an electronic mail notification. The electronic mail notification included a link to the informed consent form

for the research project and a link to an Internet site where the survey could be completed on-line. An Internet survey instrument was suitable for this study since all potential respondents have Internet access and electronic mail addresses as provided through their respective employers. Utilizing an Internet survey method was advantageous for several reasons including potential high speed of returns, advantages of computer-assisted data collection, and monetary savings to the researcher (Fowler, 2002).

Prior to finalizing the Internet survey, two research interviews were conducted to test the applicability of the questions. One cognitive interview was conducted using an interview protocol (Fowler, 2002). The intent of the oral cognitive interview was to improve the instrument design, format, and layout (Dillman, 2000; Fink, 2003; Fowler; 2002).

A pilot study was conducted to determine the survey instrument's work under realistic conditions. A purposeful sample was drawn of research administrators who were not based in the Southeastern region of the NCURA. The purposeful sample included a minimum of two people from each of the four major categories of respondents as identified in Table 1.

The survey instrument was distributed electronically, and computer-assisted technology software was utilized to collect the data. The computer-assisted application utilized for administering the Internet survey was Ultimate Survey. The backend database for the survey was Microsoft Structured Query Language (SQL) 2000. The database was able to export data as a comma separated value file, and data were retrieved in an Excel format that was easily transferred to SPSS for statistical application.

The first electronic invitation to participate in the survey was sent on March 31, 2005. The first invitation to the 277 potential respondents yielded a return of 98 surveys (35%) as of April 12, 2005. A second electronic invitation was mailed on April 12, 2005 and resulted in an additional 41 responses bringing the rate of return up to 50% as of April 20, 2005. A third electronic invitation was mailed on April 20, 2005 and resulted in 40 more responses for a 64% rate of return as of April 27, 2005. The remaining 36% who did not respond to the three electronic invitations were contacted by telephone and personally asked by the researcher to respond to the survey. These efforts resulted in an 83% response rate to the survey.

Data Analysis

The following provides a description of how the researcher analyzed the data collected from the instrument *Research Administrator Survey*. The data analysis was designed to address five key research questions through the three sections of the survey instrument: (a) perceptions of certified and non-certified research administrators, (b) demographics, and (c) perceptions of supervisors on the value of certification.

Questions 16a(1)-16a(8) were answered by CRAs and a parallel set questions 26a(1)-26a(8) were answered by non-certified research administrators. Correlations were run for questions 16a(1)-16a(8) and 26a(1)-26a(8) in the *Research Administrator Survey* to determine what variables would be included in the subsequent data analysis.

For Research Question 1, “What is the perception of certified research administrators compared to non-certified research administrators in regard to the value of

certification?” the data were disaggregated according to the demographic information of each group. An analysis of variance was performed to analyze the relationship, if any, that existed among the demographic variables and the level of agreement in regard to perceived value. This analysis determined if any particular demographic item, such as years of experience or age, had a significant correlation with any individual’s perceptions on the value of certification. Relationships among items related to perceived value and beliefs regarding certification were also examined.

For Research Question 2, “What is the relationship of demographic characteristics to the attainment of certification?” specific characteristics of each respondent was collected to determine whether perception of value is influenced by demographic characteristics.

Research Question 3, “To what extent do certified research administrators attribute their career advancement, self-confidence, and enhanced knowledge of the field to certification?” examines respondent perceptions in terms of specific characteristics pertaining to value of certification. These responses were compared with how non-certified research administrators reported perceptions of value pertaining to certification.

Research Question 4, “What reasons, if any, do non-certified research administration professionals give for not attempting certification?” determines the specific reasons for this. The response data were analyzed and presented in percentage form for each potential reason.

The perceptions of research administrators who serve in a supervisory capacity was the focus of Research Question 5, “What relationship, if any, exists between the

value placed by certified and non-certified research administrators in a supervisory role when they evaluate the qualifications of applicants for positions in research administration?” This question examined the degree of preference that supervisors give to applicants for research administration positions who have achieved certification.

Summary

The purpose of this study was to determine the perceived value of certification to research administration professionals and demographic characteristics. This chapter identified the study population and described the survey instrument and methods used in data collection.

The survey instrument, *Research Administrator Survey* was electronically distributed to 277 research administrators based in the Southeast region of the NCURA. A total of 230 surveys were completed and returned for a usable return rate of 83%. Chapter 4 provides an analysis of the data in response to the research questions.

CHAPTER FOUR

DATA ANALYSIS

Introduction

This study sought to determine whether those who attained the Certificate in Research Administration (CRA) perceive a benefit to their careers and why most research administrators do not attempt certification. The primary research question studied was concerned with the relationship between perceived value of the CRA to research administration professionals and demographic characteristics. Five research questions guided the investigation.

Data on the population's perceptions were collected using the *Research Administrator Survey* (Appendix A). This chapter focuses on the population and demographic characteristics and presents the analyses of data related to the research questions.

Population and Demographic Characteristics

The population of respondents for this study included 277 research administrators based in the Southeastern region of the National Council of University Research Administrators (NCURA). Three electronic mail requests followed by personal telephone calls to those who did not respond to the electronic mail requests resulted in a return of 230 usable surveys or an 83% rate of return. Several demographic characteristics were

collected from respondents and are categorized as personal demographic characteristics, organizational demographic characteristics, and professional organization characteristics.

Personal Demographic Characteristics

There were 171 (76%) female respondents and 54 (24%) male respondents. Respondents ranged in age from between 20-29 to over the age of 70. The majority of the respondents were between the ages of 30-59. Table 6 presents the demographic data pertaining to age of the respondents.

Table 6

Age of Respondents

| Response | N | (%) | Male (%) | Female (%) |
|--------------|-----|-------|----------|------------|
| 20-29 | 7 | (3) | (43) | (57) |
| 30-39 | 55 | (24) | (22) | (78) |
| 40-49 | 82 | (36) | (24) | (76) |
| 50-59 | 66 | (29) | (20) | (80) |
| 60-69 | 15 | (7) | (33) | (67) |
| 70 and above | 1 | (1) | (100) | (0) |
| Total | 226 | (100) | | |

The educational level of respondents ranged from high school diploma or GED equivalent to Doctorate. Over 70% of the respondents held a Bachelor's or Master's degree. Table 7 contains the educational level of respondents.

Table 7
Educational Level of Respondents

| Response | N | (%) | Male (%) | Female (%) |
|---------------------------------------|-----|-------|----------|------------|
| Bachelor's Degree | 89 | (40) | (18) | (82) |
| Master's Degree | 73 | (32) | (30) | (70) |
| Some College Credit | 29 | (13) | (3) | (97) |
| Doctoral Degree | 27 | (12) | (52) | (48) |
| High School Diploma or GED Equivalent | 5 | (2) | (20) | (80) |
| Associate Degree | 3 | (1) | (0) | (100) |
| Total | 226 | (100) | | |

Respondents were asked to identify the classification of their current position. The majority were either coordinators or directors. Table 8 illustrates position classification of respondents.

Table 8
Classification of Position

| Response | N | (%) | Male (%) | Female (%) |
|--------------------------------------------------------------|-----|-------|----------|------------|
| Coordinator or Professional Staff | 76 | (36) | (18) | (82) |
| Director | 58 | (28) | (24) | (76) |
| Associate or Assistant Dean or Director | 37 | (18) | (32) | (68) |
| General Support Staff (Administrative Assistant/Secretarial) | 24 | (12) | (8) | (92) |
| Vice President (Full, Associate, Assistant) | 10 | (5) | (40) | (60) |
| Dean | 3 | (1) | (33) | (67) |
| Total | 210 | (100) | | |

Salary level of respondents ranged from less than \$30,000 annually to above \$80,000 annually. Seventy-five percent (75%) of the respondents reported salaries between \$30,000 and \$70,000 annually. Table 9 provides details about the salary ranges of the respondents.

Table 9

Salary Ranges of Respondents

| Response | N | (%) | Male (%) | Female (%) |
|-------------------------------|-----|-------|----------|------------|
| Less than \$30,000 annually | 4 | (2) | (0) | (100) |
| \$30,000 to \$40,000 annually | 31 | (14) | (16) | (84) |
| \$40,001 to \$50,000 annually | 51 | (23) | (18) | (82) |
| \$50,001 to \$60,000 annually | 41 | (19) | (24) | (76) |
| \$60,001 to \$70,000 annually | 38 | (17) | (29) | (71) |
| \$70,001 to \$80,000 annually | 16 | (7) | (12) | (88) |
| Above \$80,000 annually | 41 | (18) | (37) | (63) |
| Total | 222 | (100) | | |

Table 10 depicts demographic characteristics pertaining to how long respondents have been employed in the field of research administration and how long respondents have been employed by their current employer. Most had been working in the field for 3-15 years.

Table 10

Length of Time in Field

| Response | How long in field of research administration? | | | | How long employed by current employer? | | | |
|--------------------|-----------------------------------------------|-------|----------|------------|----------------------------------------|-------|----------|------------|
| | N | (%) | Male (%) | Female (%) | N | (%) | Male (%) | Female (%) |
| Less than 3 years | 19 | (8) | (42) | (58) | 41 | (18) | (24) | (76) |
| 3 to 5 years | 41 | (18) | (20) | (80) | 36 | (16) | (17) | (83) |
| 6 to 10 years | 67 | (30) | (28) | (72) | 51 | (23) | (29) | (71) |
| 11 to 15 years | 35 | (16) | (26) | (74) | 44 | (19) | (25) | (75) |
| 16 to 20 years | 29 | (13) | (14) | (86) | 19 | (8) | (32) | (68) |
| More than 20 years | 34 | (15) | (18) | (82) | 35 | (16) | (17) | (83) |
| Total | 225 | (100) | | | 226 | (100) | | |

Respondents were asked how they initially became involved in the field of research administration. Table 11 provides a summary of the responses.

Table 11

How Respondents Initially Became Involved in Field of Research Administration

| Response | N* | (%)* |
|---------------------------------------------------------------------------------------------------------------------------|----|------|
| Worked in another area of the same organization and transferred to a predominantly research administration position | 81 | (36) |
| No related experience or expertise prior to becoming a research administrator | 74 | (33) |
| Worked for a government organization involved in grant related activity, but not specifically research administration | 34 | (15) |
| Worked for a not-for-profit organization involved in grant related activity, but not specifically research administration | 23 | (10) |
| Worked in the private sector involved in grant related activity, but not specifically research administration | 14 | (6) |
| Was a faculty member/professor and transferred to a predominantly research administration position | 13 | (6) |
| Was a student worker and offered a position after graduating | 3 | (1) |
| Worked at another university, but not directly in research administration | 3 | (1) |
| Grew up wanting to be a research administrator | 1 | (1) |

*N and (%) exceeds because respondents were permitted to check more than one answer.

Organizational Demographic Characteristics

Eighty-eight percent (88%) of the respondents identified college or university as the classification of organization where they were currently employed. The remaining 12% identified specialized institutions, teaching hospital, or other as the classification of organization where they were currently employed. Table 12 illustrates the Carnegie classification of the organization for each respondent.

Table 12

Carnegie Classification of Respondents Organizational Affiliation

| Response | N | (%) |
|------------------------------------|-----|-------|
| Doctoral/Research University | 163 | (74) |
| Master's Colleges and Universities | 24 | (11) |
| Specialized Institutions | 15 | (7) |
| Other | 7 | (3) |
| Baccalaureate Colleges | 5 | (2) |
| Hospital | 5 | (2) |
| Associate's College | 1 | (1) |
| Total | 220 | (100) |

Other is not considered a Carnegie classification, but respondents were able to describe their organization if it did not fit a Carnegie classification. The organizational

affiliation of the 7 respondents who selected *other* in Table 12 was identified as private research institutes.

Professional Organization Demographics

Respondents were asked if they or their affiliated organization have ever been members of nine different professional organizations that at least relate in some way to the professional field of research. The nine professional organization choices included the two preeminent professional organizations specifically dedicated to the professional field of research administration, the National Council of University Research Administrators (NCURA) and the Society of Research Administrators International (SRA). Table 13 illustrates professional organization membership of the respondents or the respondents affiliated organization.

Table 13

Professional Organization Membership

| Response | N* | (%)* |
|--------------------------------------------------------|-----|------|
| National Council of University Research Administrators | 203 | (46) |
| Society of Research Administrators International | 127 | (29) |
| National Council of University Business Officers | 29 | (7) |
| Council on Government Relations | 26 | (6) |
| Association of University Technology Managers | 13 | (3) |
| Public Responsibility in Medicine and Research | 11 | (3) |
| Applied Research Ethics National Association | 7 | (2) |
| Council of Undergraduate Research | 10 | (2) |
| Association of State Colleges and Universities | 14 | (3) |

*N and (%) exceeds because respondents were permitted to check more than one answer.

Since NCURA and SRA are the two professional organizations specifically dedicated to the field of research administration, respondents were asked if they ever attended any professional development programs offered by each of these organizations. Professional development programs included attendance at regional or national meetings, participation in any sponsored workshops or professional development institutes, satellite video training programs, or any other related professional development program. One-hundred ninety-nine(199) respondents or 87% indicated they had attended an NCURA

sponsored professional development program, and 130 respondents or 57% indicated they had attended an SRA sponsored professional development program. Respondents were asked to rank their overall experience in participating in various NCURA and SRA professional development activities. Table 14 illustrates overall experience of respondents at NCURA- and SRA- sponsored professional development programs.

Table 14

NCURA and SRA Professional Development Program Satisfaction

| Response | NCURA | | SRA | |
|--------------------|-------|-------|-----|-------|
| | N | (%) | N | (%) |
| Extremely Positive | 76 | (38) | 50 | (39) |
| Positive | 108 | (54) | 61 | (47) |
| Average | 14 | (7) | 16 | (12) |
| Negative | 1 | (1) | 3 | (2) |
| Extremely Negative | 0 | (0) | 0 | (0) |
| Total | 199 | (100) | 130 | (100) |

Respondents were asked if they had ever heard of the Research Administrators Certification Council (RACC). One-hundred seventy-eight (178) of the respondents, or 77%, indicated they had heard of the RACC and 52, or 23%, indicated they had not. One-

hundred thirteen (113) of the respondents, or 49%, indicated they were certified through the RACC, while 117, or 51%, indicated they were not certified.

Data Analysis

Correlations were run to determine what variables would be included in subsequent data analyses. The results revealed strong correlations among the items designed to measure the perceptions of certified and non-certified research administrators in regard to the value of certification. Tables 15 and 16 illustrate that the strength of the correlations allowed the items to be combined into one instrument that would measure perceptions of research administrators regarding the value of certification. All correlations are statistically significant below .0001, with the exception of four in Table 15 that are all statistically significant below .05.

Table 15

Correlation Measures of Perception of Certified Research Administrators

| | CERT16a1* | CERT16a2* | CERT16a3* | CERT16a4* | CERT16a5* | CERT16a6* | CERT16a7* | CERT16a8* |
|----------|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| CERT16a1 | 1.00 | 0.60 | 0.47 | 0.41 | 0.55 | 0.70 | 0.69 | 0.37 |
| CERT16a1 | 112 | <.0001 112 | <.0001 112 | <.0001 111 | <.0001 111 | <.0001 111 | <.0001 111 | <.0001 112 |
| CERT16a2 | | 1.00 | 0.46 | 0.40 | 0.41 | 0.56 | 0.51 | 0.46 |
| CERT16a2 | | 112 | <.0001 112 | <.0001 111 | <.0001 111 | <.0001 111 | <.0001 111 | <.0001 112 |
| CERT16a3 | | | 1.00 | 0.74 | 0.61 | 0.47 | 0.37 | 0.26 |
| CERT16a3 | | | 112 | <.0001 111 | <.0001 111 | <.0001 111 | <.0001 111 | <.0062 112 |
| CERT16a4 | | | | 1.00 | 0.73 | 0.42 | 0.38 | 0.25 |
| CERT16a4 | | | | 111 | <.0001 110 | <.0001 110 | <.0001 110 | <.0075 111 |
| CERT16a5 | | | | | 1.00 | 0.50 | 0.51 | 0.33 |
| CERT16a5 | | | | | 111 | <.0001 110 | <.0001 110 | <.0005 111 |
| CERT16a6 | | | | | | 1.00 | 0.66 | 0.31 |
| CERT16a6 | | | | | | 111 | <.0001 110 | <.0009 111 |
| CERT16a7 | | | | | | | 1.00 | 0.37 |
| CERT16a7 | | | | | | | 111 | <.0001 111 |
| CERT16a8 | | | | | | | | 1.00 |
| CERT16a8 | | | | | | | | 112 |

*CERT16a1 = Others more fully recognized ability to perform job; 16a2 = Increased opportunities for professional contributions; 16a3 = Increased salary; 16a4 = Received a promotion; 16a5 = Increased job responsibilities; 16a6 = Increased prestige among superiors within organization; 16a7 = Increased prestige among individuals within organization; 16a8 = Increased prestige among individuals outside organization.

Table 16

Correlation Measures of Perception of Non-certified Research Administrators

| | CERT26a1* | CERT26a2* | CERT26a3* | CERT26a4* | CERT26a5* | CERT26a6* | CERT26a7* | CERT26a8* |
|----------|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| CERT26a1 | 1.00 | 0.81 | 0.49 | 0.56 | 0.58 | 0.59 | 0.61 | 0.45 |
| CERT26a1 | 116 | <.0001 114 | <.0001 115 | <.0001 114 | <.0001 114 | <.0001 113 | <.0001 114 | <.0001 114 |
| CERT26a2 | | 1.00 | 0.57 | 0.61 | 0.65 | 0.61 | 0.52 | 0.57 |
| CERT26a2 | | 114 | <.0001 114 | <.0001 113 | <.0001 113 | <.0001 112 | <.0001 113 | <.0001 113 |
| CERT26a3 | | | 1.00 | 0.83 | 0.56 | 0.66 | 0.59 | 0.49 |
| CERT26a3 | | | 115 | <.0001 114 | <.0001 114 | <.0001 113 | <.0001 114 | <.0001 114 |
| CERT26a4 | | | | 1.00 | 0.66 | 0.68 | 0.60 | 0.55 |
| CERT26a4 | | | | 114 | <.0001 113 | <.0001 112 | <.0001 113 | <.0001 113 |
| CERT26a5 | | | | | 1.00 | 0.61 | 0.50 | 0.47 |
| CERT26a5 | | | | | 114 | <.0001 113 | <.0001 114 | <.0001 114 |
| CERT26a6 | | | | | | 1.00 | 0.71 | 0.66 |
| CERT26a6 | | | | | | 113 | <.0001 113 | <.0001 113 |
| CERT26a7 | | | | | | | 1.00 | 0.54 |
| CERT26a7 | | | | | | | 114 | <.0001 114 |
| CERT26a8 | | | | | | | | 1.00 |
| CERT26a8 | | | | | | | | 114 |

*CERT26a1 = Others more fully recognized ability to perform job; 26a2 = Increased opportunities for professional contributions; 26a3 = Increased salary; 26a4 = Received a promotion; 26a5 = Increased job responsibilities; 26a6 = Increased prestige among superiors within organization; 26a7 = Increased prestige among individuals within organization; 26a8 = Increased prestige among individuals outside organization.

Internal consistency was measured for items 16a1-16a8 with 26a1-26a8 using Chronbach's Coefficient Alpha. The estimated reliability was .91.

Research Question 1

What is the perception of certified research administrators compared to non-certified research administrators in regard to the value of certification?

An analysis of variance was performed to analyze the relationship between the demographic characteristics of research administrators and the level of agreement in regard to the perceived value of the Certificate in Research Administration (CRA). Table 17 illustrates that there was a statistically significant difference (.0006) between how certified research administrators perceived the value of certification and how non-certified research administrators perceived the value of certification. The means indicate that CRAs ($M=3.7037$; $SD= 0.5489$) had more positive perceptions toward certification than did non-certified research administrators ($M=3.3998$; $SC=0.6667$).

Table 17

Analysis of Variance (ANOVA) for Certified and Non-Certified Research Administrators Perception of the Value of Certification

| Source | <i>df</i> | Sum of Squares | Mean Square | F | <i>p</i> |
|--------|-----------|----------------|-------------|------|----------|
| Model | 39 | 27.16 | 0.69 | 2.10 | 0.0006 |
| Error | 170 | 56.29 | 0.33 | | |

Age, educational level, salary, and length of employment in the field of research administration were the demographic characteristics selected to compare the perceived value of certification between certified research administrators and non-certified research administrators. Table 18 illustrates that none of the interaction effects were statistically

significant. The closest demographic characteristic to approach statistical significance (.0562) was educational level.

Table 18

Analysis of Variance (ANOVA) for Demographic Characteristics and Perceived Value of Certification

| Source | <i>df</i> | Type III SS | Mean Square | F | <i>p</i> |
|--------------|-----------|-------------|-------------|------|----------|
| CERT16*DEMO3 | 8 | 2.34 | 0.29 | 0.89 | 0.5295 |
| CERT16*DEMO5 | 10 | 6.11 | 0.61 | 1.85 | 0.0562 |
| CERT16*DEMO6 | 11 | 4.23 | 0.38 | 1.16 | 0.3172 |
| CERT16*DEMO7 | 9 | 4.15 | 0.46 | 1.39 | 0.1941 |

After identifying whether or not a respondent was certified, they were asked; *do you feel more knowledgeable as a research administrator as a result of becoming certified?* Respondents were given three options: yes, no, or no difference. A Chi-square was performed to analyze the differences between certified and non-certified research administrators in relation to the question. Table 19 displays the results of the Chi-square test. In the analysis there was a statistically significant difference (<.0001) between whether or not certified and non-certified research administrators perceived feeling more knowledgeable as a result of certification. The majority of the non-certified respondents indicated they would not feel more knowledgeable or that being certified would not make a difference.

Table 19

Chi-square Summary of Certified and Non-Certified Research Administrators Perceptions Regarding Knowledge

| | Yes | No | No Difference |
|---------------|-------|-------|---------------|
| Not Certified | 35.16 | 81.40 | 61.11 |
| Certified | 64.84 | 18.60 | 38.89 |

Note: $df = 2$; Chi-Square value = 30.8976; $p < .0001$

In regard to the question, *Do you feel more confident in your ability to do your work as a research administrator as a result of becoming certified*, respondents indicated if they were certified or not and given three options to respond to the question. The options included: yes, no, and no difference. Table 20 displays the results of the Chi-square test. In the analysis there is a statistically significant difference ($<.0001$) between whether certified and non-certified research administrators felt more confident as a result of certification. The majority of the non-certified respondents indicated they would not feel more confident or that being certified would not make a difference.

Table 20

Chi-square Summary of Certified and Non-Certified Research Administrators Perceptions Regarding Confidence

| | Yes | No | No Difference |
|---------------|-------|-------|---------------|
| Not Certified | 33.06 | 81.13 | 61.22 |
| Certified | 66.94 | 18.87 | 38.78 |

Note: $df = 2$; Chi-Square value = 37.2276; $p < .0001$

Research Question 2

What is the relationship of demographic characteristics to the attainment of certification?

In regard to the demographic characteristic of age, respondents were asked to choose a particular category for age ranging from 20-29 to over 70. A Chi-square analysis was calculated for each of the six age categories, and the results are presented in Table 21. There was a statistically significant relationship (.0373) between age and certification status of research administrators. Of the respondents who indicated they were not certified, the majority indicated they were less than 39 years old.

Table 21

Chi-square Summary of Age of Certified and Non-Certified Research Administrators

| | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70+ |
|---------------|--------|-------|-------|-------|-------|--------|
| Certified | 0.00 | 40.00 | 52.44 | 57.58 | 46.67 | 0.00 |
| Non-certified | 100.00 | 60.00 | 47.56 | 42.42 | 53.33 | 100.00 |

Note: $df = 5$; Chi-Square value = 11.8260; $p .0373$

In regard to the demographic characteristic of educational level, respondents were asked to choose a particular category for educational level ranging from doctorate to high school diploma. A Chi-square analysis was calculated for each of the six age categories, and the results are presented in Table 22. Although there was not a statistically significant relationship (.3729), the results followed a similar pattern as the other demographic characteristics.

Table 22

Chi-square Summary of Educational Level of Certified and Non-Certified Research Administrators

| | Doctorate | Masters | Bachelors | Associates | College | High School |
|---------------|-----------|---------|-----------|------------|---------|-------------|
| Certified | 33.33 | 53.42 | 49.44 | 66.67 | 51.72 | 20.00 |
| Non-certified | 66.67 | 46.58 | 50.56 | 33.33 | 48.28 | 80.00 |

Note: $df = 5$; Chi-Square value = 5.3660; $p .3729$

In regard to the demographic characteristic of salary, respondents were asked to choose a particular category for salary ranging from under \$30,000 annually to over \$80,000 annually. A Chi-square analysis was calculated for each of the seven categories, and the results are presented in Table 23. There was a statistically significant relationship ($<.0001$) between salary and certification status of research administrators. The majority of the respondents who indicated they were not certified earned less than \$40,000 annually or more than \$80,000 annually.

Table 23

Chi-square Summary of Salary Level of Certified and Non-Certified Research Administrators

| | <\$30K | \$30-40K | \$40-50K | \$50-60K | \$60-70K | \$70-80K | >\$80K |
|---------------|--------|----------|----------|----------|----------|----------|--------|
| Certified | 0.00 | 9.68 | 52.94 | 68.85 | 63.16 | 62.50 | 41.46 |
| Non-certified | 100.00 | 90.32 | 47.06 | 34.15 | 36.84 | 37.50 | 58.54 |

Note: $df = 6$; Chi-Square value = 33.1485; $p < .0001$

In regard to the demographic characteristic of length of employment as a research administrator, respondents were asked to choose a particular category for length of employment as a research administrator ranging from less than 3 years to more than 20 years. A Chi-square analysis was calculated for each of the six categories, and the results are presented in Table 24. There was a statistically significant relationship ($<.0001$) between length of employment in the field of research administration and certification status of research administrators. The majority of the respondents who indicated they

were not certified were employed in the field of research administration for less than 5 years.

Table 24

Chi-square Summary of Length of Employment in Field of Certified and Non-Certified Research Administrators

| | <3 yrs | 3-5 yrs | 5-10 yrs | 10-15 yrs | 15-20 yrs | 20+ yrs |
|---------------|--------|---------|----------|-----------|-----------|---------|
| Certified | 0.00 | 19.51 | 52.24 | 74.29 | 55.17 | 70.59 |
| Non-certified | 100.00 | 80.49 | 47.76 | 25.71 | 44.83 | 29.41 |

Note: $df = 5$; Chi-Square value = 48.5396; $p < .0001$

Research Question 3

To what extent do certified research administrators attribute their career advancement, self-confidence, and enhanced knowledge of the field to certification?

Certified and non-certified research administrators were asked a set of questions pertaining to their perceptions of certification being beneficial to their career in terms of eight characteristics. Respondents were asked to indicate their perceptions utilizing a scale ranging from strongly agree to strongly disagree. Table 25 displays a frequency table of the results.

Table 25

Frequency Table of Perceptions of Research Administrators Regarding Career Advancement Utilizing Five Point Scale

| CERTIFIED | | Strongly Agree | | Agree | | No Difference | | Disagree | | Strongly Disagree | |
|-----------------------------------------------------------------------|-----|----------------|------|-------|------|---------------|------|----------|-----|-------------------|-----|
| Item | N | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) |
| Having others more fully recognize your abilities to perform your job | 112 | 28 | (25) | 67 | (60) | 17 | (15) | 0 | - | 0 | - |
| Increased your prestige among superiors within your organization | 111 | 24 | (22) | 50 | (45) | 36 | (33) | 1 | (1) | 0 | - |
| Increased your prestige among individuals within your organization | 111 | 23 | (21) | 64 | (58) | 24 | (22) | 0 | - | 0 | - |
| Increased your job responsibilities | 111 | 18 | (16) | 27 | (24) | 63 | (57) | 1 | (1) | 2 | (2) |
| Increased you professional opportunities for contributions | 112 | 17 | (15) | 38 | (34) | 56 | (50) | 1 | (1) | 0 | - |
| Increased your salary | 112 | 11 | (10) | 33 | (29) | 62 | (55) | 3 | (3) | 3 | (3) |
| Increased your prestige among individuals outside your organization | 112 | 11 | (10) | 67 | (60) | 34 | (30) | 0 | - | 0 | - |
| Received a promotion | 111 | 9 | (8) | 23 | (21) | 73 | (66) | 3 | (3) | 3 | (3) |
| NOT CERTIFIED | | | | | | | | | | | |
| Having others more fully recognize your abilities to perform your job | 116 | 19 | (16) | 40 | (34) | 50 | (43) | 6 | (5) | 1 | (1) |
| Increased you professional opportunities for contributions | 114 | 16 | (14) | 39 | (34) | 52 | (46) | 6 | (5) | 1 | (1) |
| Increased your prestige among individuals outside your organization | 114 | 9 | (8) | 60 | (53) | 41 | (36) | 3 | (3) | 1 | (1) |
| Increased your salary | 115 | 8 | (7) | 27 | (23) | 64 | (56) | 9 | (8) | 7 | (6) |
| Increased your job responsibilities | 114 | 8 | (7) | 28 | (25) | 69 | (61) | 6 | (5) | 3 | (3) |
| Increased your prestige among individuals within your organization | 114 | 8 | (7) | 41 | (36) | 57 | (50) | 6 | (5) | 2 | (2) |
| Received a promotion | 114 | 7 | (6) | 28 | (25) | 63 | (55) | 9 | (8) | 7 | (6) |
| Increased your prestige among superiors within your organization | 113 | 7 | (6) | 44 | (39) | 52 | (46) | 7 | (6) | 3 | (3) |

Eighty-five percent (85%) of the certified research administrators (CRAs) agreed or strongly agreed that others more fully recognize their ability to perform their job compared to 50% of non-certified research administrators. Seventy-nine percent (79%) of the CRAs agreed or strongly agreed that their prestige among individuals within their organization increased as a result of becoming certified compared to 43% of non-certified research administrators. Seventy percent (70%) of the CRAs agreed or strongly agreed that their prestige among individuals outside their organization increased as a result of becoming certified compared to 61% of non-certified research administrators.

Sixty-seven percent (67%) of the CRAs agreed or strongly agreed that their prestige among superiors within their organization increased as a result of becoming certified compared to 45% of non-certified research administrators. Forty-nine percent (49%) of the CRAs agreed or strongly agreed that their opportunities for professional contributions were increased as a result of becoming certified compared to 48% of non-certified research administrators. Forty percent (40%) of the CRAs agreed or strongly agreed that their job responsibilities increased as a result of becoming certified compared to 32% of non-certified research administrators.

Thirty-nine percent (39%) of the CRAs agreed or strongly agreed that their salary increased as a result of becoming certified compared to 30% of non-certified research administrators. Fifty-five percent (55%) of the CRAs indicated no difference that their salary increased as a result of becoming certified compared to 56% of the non-certified research administrators. Twenty-nine percent (29%) of the CRAs agreed or strongly agreed that they would receive a promotion as a result of becoming certified compared to

31% of the non-certified research administrators. Sixty-six percent (66%) of the CRAs indicated no difference that they would receive a promotion as a result of becoming certified compared to 55% of the non-certified research administrators.

In regard to enhanced knowledge of the field and self-confidence, certified and non-certified research administrators were asked two specific questions with yes, no, and no difference as choices for responding. Table 26 displays a frequency table of the results.

Table 26

Frequency Table of Perceptions of Research Administrators Regarding Enhanced Knowledge and Self-Confidence

| CERTIFIED | Yes | | No | | No Difference | |
|--------------------------------------------------------------------------------------------------------------------------|-----|---------|----|-------|---------------|-------|
| | N | N (%) | N | N (%) | N | N (%) |
| Do you feel more knowledgeable as a research administrator as a result of becoming certified | 112 | 83 (74) | 8 | (7) | 21 | (19) |
| Do you feel more confident in your ability to do your work as a research administrator as a result of becoming certified | 112 | 83 (74) | 10 | (9) | 19 | (17) |
| NOT CERTIFIED | Yes | | No | | No Difference | |
| | N | N (%) | N | N (%) | N | N (%) |
| Do you feel more knowledgeable as a research administrator as a result of becoming certified | 113 | 45 (40) | 35 | (31) | 33 | (29) |
| Do you feel more confident in your ability to do your work as a research administrator as a result of becoming certified | 114 | 41 (36) | 43 | (38) | 30 | (26) |

In terms of enhanced knowledge, 74% of the CRAs indicated they felt more knowledgeable as a research administrator as a result of becoming certified compared to only 40% of the non-certified research administrators. In terms of confidence, 74% of the CRAs indicated they felt more confident in their ability to do their work as a result of becoming certified compared to only 36% of the non-certified research administrators.

Research Question 4

What reasons, if any, do non-certified research administration professionals give for not attempting certification?

Eighty-two percent (82%), or 96 of 117, of the non-certified research administration professionals provided a reason for not attempting certification. The various responses are provided in percentage form in Table 27.

Table 27

Percentages of Reasons for not Attempting Certification

| Response | N | (%) |
|----------------------------------------------------------------------------------------------------|----|------|
| I don't believe there is any benefit to me becoming certified | 38 | (40) |
| I don't have the time | 11 | (11) |
| I am unaware of the Certificate in Research Administration (CRA) opportunity | 11 | (11) |
| My employer will not support me in my efforts to become certified | 10 | (10) |
| I am currently not eligible to sit for the certification exam | 9 | (9) |
| I don't think achieving certification is worth the time | 7 | (7) |
| I am planning to take the exam in the near future | 6 | (6) |
| I have no desire to take the exam | 3 | (3) |
| I've not been asked to become certified by my employer and have other professional interests | 3 | (3) |
| It is not necessary for me to become certified at this point in my career | 2 | (2) |
| My area of expertise is narrowly focused and does not require me to possess a broad knowledge base | 2 | (2) |
| I have contemplated it, but it would be too expensive for everybody in the office to take the exam | 1 | (1) |
| I did attempt certification, but did not pass the exam | 1 | (1) |

Research Question 5

What relationship, if any, exists between the value placed by certified and non-certified research administrators in a supervisory role when they evaluate the qualifications of applicants for positions in research administration?

An analysis of variance was performed to analyze the relationship between the value placed by certified and non-certified research administrators in a supervisory role when they evaluate the qualifications of applicants for positions in research administration and the perceived value of the Certificate in Research Administration (CRA). Table 28 illustrates that there was a statistically significant difference ($<.0001$) between how certified research administrators perceived the value of certification and how non-certified research administrators perceived the value of certification.

Table 28

Analysis of Variance for Certified and Non-Certified Research Administrator Supervisors Perceptions of the Value of Certification

| Source | <i>Df</i> | Sum of Squares | Mean Square | F | <i>p</i> |
|--------|-----------|----------------|-------------|-------|----------|
| Model | 1 | 14.64 | 14.64 | 70.32 | $<.0001$ |
| Error | 124 | 25.81 | 0.20 | | |

Research administrators who were certified and who serve in a supervisory role were more likely to include a preference for Certified Research Administrators (CRAs) when they advertise for research administration positions, give preference to CRAs when they hire, and be more likely to negotiate a higher starting salary for CRAs. They also

perceived hiring CRAs as more beneficial to their organizations in terms of people within the organization more fully recognizing a CRA’s ability to perform the job, increased credibility of the employee within the organization, increased credibility of the employee outside their organization, and increased professional contributions. Table 29 displays the mean score based on a scale ranging from strongly agree with a value equal to one to strongly disagree with a value equal to 5. The mean score (2.01) for research administrators who serve in a supervisory role and who are certified, indicates that they would be more likely to give preference to CRAs.

Table 29

Mean Score for Certified and Non-Certified Research Administrator Supervisors Perceptions of Value

| | N | Mean | SD |
|---------------|----|------|------|
| Certified | 76 | 2.01 | 0.39 |
| Non-certified | 50 | 2.70 | 0.55 |

Summary

This chapter has presented analyses of data generated by the responses of 230 research administrators based in the Southeast region of the National Council of University Research Administrators (NCURA). The survey instrument, Research Administrator Survey (Appendix A), was used to collect demographic characteristics of

the respondents and to compare the perceived value of certification to certified and non-certified research administrators. The respondents' perceptions of the value of certification that were obtained from the survey instrument were used to answer the research questions that guided this study.

A discussion of the results, implications, conclusions, and recommendations based upon the data displayed in this chapter is presented in Chapter 5.

CHAPTER FIVE
SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

The professional field of research administration faces critical challenges in maintaining and cultivating a talented group of skilled administrators in the new millennium. Universities have created increasingly complex bureaucracies to manage the dramatic rise in research funding and the complicated legal and regulatory requirements associated with receiving funding for research (Hansen & Moreland, 2004). As a result, the number of people employed in the field of research administration has increased.

Certification programs are designed to confirm that individuals in a given profession possess the fundamental knowledge necessary to serve their employer and profession in the best possible manner. The Research Administrators Certification Council (RACC) was formed in conjunction with the Society of Research Administrators International (SRA) in 1993 with the primary purpose of certifying that an individual, through experience and testing, has the fundamental knowledge necessary to be a professional research or sponsored programs administrator (Research Administrators Certification Council, 2004a). Since the RACC was formed in 1993, 501 research administration professionals have achieved certification (Research Administrators Certification Council, 2005).

Statement of the Problem

The value of certification in the field of research administration is not known. Research administration professionals do not know whether certification benefited the careers of those who have achieved it, or why most research administrators do not attempt certification. The primary focus of the study was concerned with the relationship between perceived value of the Certificate in Research Administration (CRA) to research administration professionals and demographic characteristics.

Methodology

A survey instrument was developed to collect data from certified research administrators (CRAs) and non-certified research administrators. The survey collected demographic information to help describe the relationship between the demographic characteristics of the population and perception of value. The survey developed was distributed to respondents via an electronic mail notification and included a link to an Internet site where the survey could be completed online.

Population and Demographic Characteristics

The population of respondents for this study included 277 research administrators based in the Southeastern region of the National Council of University Research Administrators (NCURA). Three electronic mail requests followed by personal telephone calls to those who did not respond to the electronic mail requests resulted in a return of 230 usable surveys for an 83% rate of return.

Summary and Discussion of the Findings

The summary findings and discussion of the data collected for the five research questions of this study are presented below:

Research Question 1

What is the perception of certified research administrators compared to non-certified research administrators in regard to the value of certification?

The relationship between the demographic characteristics of research administrators and the level of agreement in regard to the perceived value of the Certificate in Research Administration (CRA) was analyzed to determine if perceptions of value were different between CRAs and non-certified research administrators. There was a statistically significant difference ($<.0006$) between how CRAs perceive the value of certification and how non-certified research administrators perceive the value of certification. CRA's perception of the value of certification was significantly greater than that of non-certified research administrators.

Age, educational level, salary, and length of employment in the field of research administration were the demographic characteristics selected to compare the perceived value of certification between certified research administrators and non-certified research administrators. The interaction effect was found to be not statistically significant. The closest demographic characteristic to approach statistical significance ($<.0562$) was perception of value and educational level.

In response to the question, *Do you feel more knowledgeable as a research administrator as a result of becoming certified*, the overwhelming majority of the CRAs

indicated they did feel more knowledgeable as a result of becoming certified. In response to the question, *Do you believe you would feel more knowledgeable as a research administrator if you were certified*, the majority of non-certified research administrators indicated that they would feel more knowledgeable, but it was by a much smaller margin as almost as many perceived that being certified would not make a difference.

In response to the question, *Do you feel more confident in your ability to do your work as a research administrator as a result of becoming certified*, CRAs indicated they did feel more confident. In response to the question, *Do you believe you would feel more confident in your ability to do your work as a research administrator if you were certified*, the majority of the non-certified respondents indicated that they would not feel more confident or that being certified would not make a difference.

Analyses of both summary data and selected demographic variables revealed that CRAs consistently perceived the value of certification to be greater than non-certified research administrators.

Research Question 2

What is the relationship of demographic characteristics to the attainment of certification?

Age, educational level, salary, and length of employment in the field of research administration were the demographic characteristics selected to compare the perceived value of certification between CRAs and non-certified research administrators.

In regard to the demographic characteristic of age, there was a statistically significant relationship ($<.0373$) between age and certification status of research administrators. Of the respondents who indicated they were not certified, the majority indicated they were less than 39 years old. This indicated that younger non-certified research administrators may not value certification as much as those over 40. This may be as a result of being undecided in terms of their career, being unaware of the opportunity to become certified, or being employed at an institution that was not supportive of certification.

In regard to the demographic characteristic of educational level, there was not a statistically significant relationship ($<.3729$), although the pattern of the results was similar to the pattern formed by the statistically significant demographic characteristics. This indicated that non-certified research administrators who already held a doctorate may feel they do not need to become certified, and CRAs with an Associate's Degree or less education may have felt they did need to become certified to show evidence of their expertise.

In regard to the demographic characteristic of salary, there was a statistically significant relationship ($<.0001$) between salary and certification status of research

administrators. The majority of the respondents who indicated they were not certified earned less than \$40,000 annually or more than \$80,000 annually. This suggested that non-certified research administrators who earned less than \$40,000 annually may not perceive certification as being valuable and those earning more than \$80,000 annually may not perceive the need to become certified. The majority of CRAs earned between \$40,000 and \$80,000 annually. Less than 3%, or 3 of 108 CRAs, earned less than \$40,000 annually.

In regard to the demographic characteristic of length of employment as a research administrator, there was a statistically significant relationship ($<.0001$) between length of employment in the field of research administration and certification status of research administrators. The majority of the respondents who indicated they were not certified were employed in the field of research administration for less than 10 years with most of them being employed in the field for between 3 and 10 years. This was important to note since the RACC required a minimum of three years of work experience in the field of research administration before research administrators became eligible to take the certification exam. Not only were research administrators ineligible to take the certification exam with less than 3 years of experience, the data revealed that they also did not take the exam after they became eligible. This leads to the conclusion that non-certified research administrators who were early in their careers were not becoming certified.

Research Question 3

To what extent do certified research administrators attribute their career advancement, self-confidence, and enhanced knowledge of the field to certification?

Certified and non-certified research administrators were asked a set of questions pertaining to their perceptions of certification being beneficial to their career in terms of eight characteristics and two specific questions pertaining exclusively to enhanced knowledge and confidence.

The summary findings and discussion of the data collected for the eight characteristics are presented below:

1. Eighty-five percent (85%) of the certified research administrators (CRAs) agreed or strongly agreed that others more fully recognize their ability to perform their job compared to 50% of the non-certified research administrators. This perception was consistent with the perceived value of certification being greater for CRAs than non-certified research administrators. Although there was a significant difference in perception between CRAs and non-certified research administrators, the majority of non-certified research administrators still agreed or strongly agreed that others would more fully recognize their ability to perform their job.

2. Seventy-nine percent (79%) of the CRAs agreed or strongly agreed that their prestige among individuals within their organization increased as a result of becoming certified compared to 43% of non-certified research administrators. This perception was consistent with the perceived value of certification being greater for CRAs than non-certified research administrators. The majority of non-certified research administrators

did not perceive certification making a difference in terms of increased prestige among individuals within their organization.

3. Seventy percent (70%) of the CRAs agreed or strongly agreed that their prestige among individuals outside their organization increased as a result of becoming certified compared to 61% of the non-certified research administrators. Although there was a small difference in perception between CRAs and non-certified research administrators in regard to this characteristic, the majority of non-certified research administrators positively perceived the value of certification in terms of prestige among individuals outside their organization.

4. Sixty-seven percent (67%) of the CRAs agreed or strongly agreed that their prestige among superiors within their organization was greater as a result of becoming certified compared to 45% of the non-certified research administrators. This perception was consistent with the perceived value of certification being greater for CRAs than non-certified research administrators. The majority of non-certified research administrators did not think certification made a difference in terms of prestige among superiors within their organization.

5. Fifty-percent (50%) of the CRAs indicated no difference in regard to certification being beneficial in terms of increased professional opportunities for contributions compared to 46% of the non-certified research administrators. Forty-eight (48%) of the non-certified research administrators agreed or strongly agreed that they perceived a benefit. The perceptions of both CRAs and non-certified research administrators were similar in regard to certification being beneficial in terms of

increased professional opportunities for contributions, but slightly more non-certified research administrators agreed or strongly agreed that there was a perceived a benefit.

6. Fifty-seven percent (57%) of the CRAs indicated no difference in regard to certification leading to increased job responsibilities as a result of certification compared to 61% of the non-certified research administrators. The perceptions of both CRAs and non-certified research administrators were similar in regard to certification leading to increased job responsibilities.

7. Thirty-nine percent (39%) of the CRAs agreed or strongly agreed that their salary increased as a result of becoming certified compared to 30% of the non-certified research administrators. Fifty-five percent (55%) of the CRAs indicated no difference that their salary increased as a result of becoming certified compared to 56% of the non-certified research administrators. The perceptions of both CRAs and non-certified research administrators were similar in regard to certification leading to an increase in salary.

8. Twenty-nine percent (29%) of CRAs agreed or strongly agreed that they would receive a promotion as a result of becoming certified compared to 31% of non-certified research administrators. Sixty-six percent (66%) of the CRAs indicated no difference that they would receive a promotion as a result of becoming certified compared to 55% of the non-certified research administrators. The perceptions of both CRAs and non-certified research administrators were similar in regard to certification leading to a promotion.

The summary findings and discussion of the data collected for enhanced knowledge and confidence are presented below:

In terms of enhanced knowledge, 74% of the CRAs indicated they do feel more knowledgeable as a research administrator as a result of becoming certified compared to 40% of the non-certified research administrators. Although there is a significant difference of perception between CRAs and non-certified research administrators, the majority of non-certified research administrators still indicated they would feel more knowledgeable as a result of certification.

In terms of confidence, 74% of the CRAs indicated they felt more confident in their ability to do their work as a result of becoming certified compared to 36% of the non-certified research administrators. Thirty-eight percent (38%) of non-certified research administrators indicated they would not feel more confident in their ability to do their work as a result of certification.

Research Question 4

What reasons, if any, do non-certified research administration professionals give for not attempting certification?

Eighty-two percent (82%), or 96 of 117, of the non-certified research administrators provided a reason for not attempting certification, with 40%, or 38 of 96, indicating they did not believe there was any benefit to becoming certified. There was a tie for the second most popular reason for not attempting certification between not having enough time and not being aware of the opportunity to become a CRA, each garnering

11%, or 11 of 96, of the responses of reasons for not attempting certification. Despite the perception of the majority of non-certified research administrators doubting the value of certification, some of the reasons provided by non-certified research administrators suggested they were not opposed to the concept of becoming a CRA. As examples of this, none of the following were individual objections to the concept of certification: (1) a current employer does not support a research administrator's effort to become certified, (2) a research administrator is not eligible to sit for the exam, and (3) a research administrator takes the exam but does not pass.

Overall, the majority of non-certified research administrators do not believe there was a benefit to becoming certified. However, when all the other reasons for not attempting certification were closely examined, the responses taken as a whole indicate that as many non-certified research administrators may perceive a benefit to becoming certified as those who do not perceive a benefit. These data indicated that non-certified research administrators perceived some benefit to certification.

Research Question 5

What relationship, if any, exists between the value placed by certified and non-certified research administrators in a supervisory role when they evaluate the qualifications of applicants for positions in research administration?

The relationship between the value placed by certified and non-certified research administrators in a supervisory role when they evaluate the qualifications of applicants for positions in research administration and the perceived value of the Certificate in Research Administration (CRA) were analyzed. These data revealed that there was a

statistically significant difference ($<.0001$) between the perceptions of CRA supervisors and non-certified research administrator supervisors regarding the value of certification.

Research administrators who were certified and who served in a supervisory role were more likely to include a preference for Certified Research Administrators (CRAs) when they advertised for research administration positions, give preference to CRAs when they hire, and were more likely to negotiate a higher starting salary for CRAs. They also perceived hiring CRAs as being more beneficial to their organizations in terms of people within the organization more fully recognizing a CRAs ability to perform their job, increased credibility of the employee within the organization, increased credibility of the employee outside their organization, and increased professional contributions.

The perception of CRAs who were supervisors and non-certified research administrators who were supervisors were similar to those of CRAs and in general. CRAs perception of value in regard to the CRA was greater than that of non-certified research administrators.

Discussion of Findings

This study sought to determine the value of certification in the field of research administration and was concerned with the relationship between perceived value of the Certificate in Research Administration (CRA) to research administration professionals and demographic characteristics.

In terms of personal demographic characteristics, research administrators were an educated group of professionals, with 84%, or 189 of 226, holding at least a Bachelor's

degree. The majority of respondents ranged in age from 30-59, with 90%, or 203 of 226, falling in this category. The majority of the respondents were from doctoral granting research universities, and they were classified as coordinators or professional staff with an annual salary range of \$40,001-\$50,000 and had been employed in the field of research administration for 5-10 years. Most respondents initially became involved in the field of research administration by working in another area of the university not directly related to research administration and had transferred to a predominantly research administration position or had no related experience or expertise prior to becoming a research administrator.

The research revealed that CRAs and non-certified research administrators both held negative views of the value of the CRA with regard to some specific characteristics. For example, certification was perceived by both CRAs and non-certified research administrators as not making any difference in terms of increased job responsibilities, salary increases, and promotion. This indicated that research administrators in general doubted that certification would lead to increased job responsibilities, promotions, or salary increases.

There were also some positive views toward certification that were shared between CRAs and non-certified research administrators. Both groups perceived benefit in terms of prestige among individuals outside their organization increasing as a result of becoming certified and others more fully recognizing their ability to perform their jobs. These findings led to the conclusion that research administrators did not believe that their

organizations internally value certification, whereas research administrators did perceive value external to their own organizations.

In terms of feeling more knowledgeable as a result of certification, 83% of CRAs and 45% of non-certified research administrators believed they would feel more knowledgeable as a result of certification. Despite this significant difference in perception, the majority of both CRAs and non-certified research administrators perception was that becoming certified would, or did, enhance their knowledge as research administrators.

The research revealed some differences in the perception of value of the CRA in terms of research administrators feeling that their prestige among individuals within their organizations would increase and their prestige among superiors within their organization would increase as a result of becoming certified. CRAs overwhelmingly agreed or strongly agreed that their prestige was enhanced within their organizations, and non-certified research administrators perceived there would be no difference in their prestige. This leads to the conclusion that CRA's perception of value was greater than that of non-certified research administrators' perception of value in prestige among individuals and superiors within their organizations.

The research revealed two additional subtle differences in the perception of value in terms of increased professional opportunities to contribute and increased confidence in their ability to perform their work as a result of certification. Slightly more non-certified research administrators agreed or strongly agreed that certification would increase their professional opportunities for contributions, whereas CRAs perception was that there

would be no difference in their opportunities for professional contributions. There was also a minor difference in feeling more confident in ability to do their work as a research administrator, with slightly more non-certified research administrators' perceiving they would not feel more confident compared to CRAs' dominant perception that they did feel more confident in their ability to do their work as a research administrator.

Implications and Recommendations for Professional Organizations

The National Council of University Research Administrators (NCURA) and the Society for Research Administrators International (SRA) were the two primary professional organizations dedicated exclusively to the field of research administration. Research administrators' perceptions of NCURA and SRA professional development opportunities were extremely positive, with 90% of respondents reporting positive or extremely positive experiences with professional development opportunities offered through these organizations. The Research Administration Certification Council (RACC) was established in conjunction with the SRA; however, there was no association with NCURA, and since the establishment of RACC in 1993 there was not a coordinated effort between RACC and SRA that was recognized by research administrators as being of vital importance to them personally or the profession in general. Professional organizations could potentially benefit from offering certification programs to research administrators through financial gain and being recognized as positively serving their membership (Knapp & Gallery, 2003).

There are many perceived positive implications of certification among research administrators, including enhanced prestige among individuals outside ones' own organization and enhanced personal knowledge. If RACC is to be widely recognized as a value to individuals and their respective institutions, it needs to be more closely aligned with the professional organizations that research administrators report as providing positive professional development experiences. Since the professional field of research administration emerged, it has consistently grown larger, and universities have been forced to pay close attention to the administration of research dollars and the fostering of the research enterprise in general. It is reasonable to assume that hiring the most knowledgeable research administrators would be a high priority to universities. Since the vast majority of research administrators enter the profession with little or no experience in the field, it should be extremely important to employers to have high quality and comprehensive professional development opportunities readily available for newcomers to the field.

Even though both CRAs and non-certified research administrators doubt the value of certification in terms of increased job responsibility, promotions, and salary, CRAs report earning more money on an annual basis than do their non-certified counterparts. The only exception was those earning more than \$80,000 annually. The majority of those earning more than \$80,000 annually were not certified, and it was concluded that those individuals may not feel they needed to become certified.

In summary, a comprehensive certification program in the professional field of research administration has strong potential to serve individuals, organizations, and

sponsors of research in an effective and positive way. In order to accomplish this, a comprehensive certification program should be closely aligned with the two major professional organizations dedicated exclusively to the professional field of research administration.

Recommendations for Future Research

Further research is suggested in the following areas:

1. It is recommended that a replication of this study be done in another region of the United States to further validate the results.
2. It is recommended that a replication of this study be done on an international scale to further validate the results.
3. It is recommended that research be conducted to determine if curriculum at the university level should be developed in research administration management.
4. It is recommended that the primary professional organizations in support of research administration engage in research to determine how many people are involved in the profession of research administration to help make decisions in regard to continuing adult education.
5. It is recommended that research be conducted focusing on the employers of research administration professionals to determine if they would value being served by a Certified Research Administrator (CRA) through the Research Administrators Certification Council (RACC).

6. It is recommended that NCURA and SRA engage in research about specific needs and preferences of its membership.

APPENDIX A
RESEARCH ADMINISTRATOR SURVEY

RESEARCH ADMINISTRATOR SURVEY

No empirical study has ever been conducted focusing specifically on the research administrator. Please contribute toward the betterment of our profession, and your own professional development, by taking a few minutes to respond to the following questions pertaining to research administrators.

1. What is your present job title? **(DEMO1)**

(Fill-in)

2. Which of the following best describes the classification of your current position? **(DEMO2)**

- Vice President **(Value = 1)**
- Dean **(Value = 2)**
- Director **(Value = 3)**
- Assistant/Associate Dean or Director **(Value = 4)**
- Coordinator **(Value = 5)**
- General Support Staff (Administrative Assistant/Secretarial) **(Value = 6)**
- Other (please describe) **(Value = 7)**

3. How old are you? **(DEMO3)**

- 20-29 **(Value = 1)**
- 30-39 **(Value = 2)**
- 40-49 **(Value = 3)**
- 50-59 **(Value = 4)**
- 60-69 **(Value = 5)**
- 70 and above **(Value = 6)**

4. What is your gender? **(DEMO4)**

- Male **(Value = 1)**
- Female **(Value = 2)**

5. What is your present educational level? **(DEMO5)**
- Doctoral Degree (**Value = 1**)
 - Master's Degree (**Value = 2**)
 - Bachelor's Degree (**Value = 3**)
 - Associates Degree (**Value = 4**)
 - Some college credit (**Value = 5**)
 - High School Diploma or GED Equivalent (**Value = 6**)
 - No high school diploma or GED Equivalent (**Value = 7**)
6. What is your current salary? **(DEMO6)**
- Less than \$30,000 annually (**Value = 1**)
 - \$30,000 to \$40,000 annually (**Value = 2**)
 - \$40,001 to \$50,000 annually (**Value = 3**)
 - \$50,001 to \$60,000 annually (**Value = 4**)
 - \$60,001 to \$70,000 annually (**Value = 5**)
 - \$70,001 to \$80,000 annually (**Value = 6**)
 - Above \$80,000 annually (**Value = 7**)
7. How long have you been employed in the field of research administration?
(DEMO7)
- Less than 3 years (**Value = 1**)
 - 3 to 5 years (**Value = 2**)
 - 6 to 10 years (**Value = 3**)
 - 11 to 15 years (**Value = 4**)
 - 16 to 20 years (**Value = 5**)
 - More than 20 years (**Value = 6**)
8. How long have you been employed by your current employer? **(DEMO8)**
- Less than 3 three years (**Value = 1**)
 - 3 to 5 years (**Value = 2**)
 - 6 to 10 years (**Value = 3**)
 - 11 to 15 years (**Value = 4**)
 - 16 to 20 years (**Value = 5**)
 - More than 20 years (**Value = 6**)

9. What is the classification of the organization where you are currently employed?
(DEMO9)

- College/University (**Value = 1**)
- Not-for-profit (**Value = 2**)
- Teaching hospital (**Value = 3**)
- Other (please describe) (**Value = 4**)

10. What is the Carnegie classification of your organization? If you don't know, please use the drop down menu and it will describe the characteristics of each classification. **(DEMO10) (A link is provided in the Web based survey providing descriptions of each classification)**

- Doctoral/Research University (**Value = 1**)
- Master's Colleges and Universities (**Value = 2**)
- Baccalaureate Colleges (**Value = 3**)
- Associate's Colleges (**Value = 4**)
- Specialized Institutions (**Value = 5**)
- Tribal Colleges and Universities (**Value = 6**)
- Other (please describe) (**Value = 7**)

11. How did you initially become involved in the field of research administration?
(DEMO11)

- Grew up wanting to be a research administrator (**Value = 1**)
- Worked for a government organization involved in grant related activity, but not specifically research administration (**Value = 2**)
- Worked for a not-for-profit organization involved in grant related activity, but not specifically research administration (**Value = 3**)
- Worked in the private sector involved in grant related activity, but not specifically research administration (**Value = 4**)
- Worked in another area of the same organization and transferred to a predominantly research administration position (**Value = 5**)
- Was a faculty member/professor and transferred to a predominantly research administration position (**Value = 6**)
- No related experience or expertise prior to becoming a research administrator
- Other (please describe) (**Value = 7**)

12. Are you presently or have you ever been a member of the following professional organizations? (Please check all that apply) **(DEMO12)**

- National Council of University Research Administrators (**Value = 1**)
- Society of Research Administrators (**Value = 2**)
- National Council of University Business Officers (**Value = 3**)
- Council on Government Relations (**Value = 4**)
- Association of University Technology Managers (**Value = 5**)
- Public Responsibility in Medicine and Research (**Value = 6**)
- Applied Research Ethics National Association (**Value = 7**)
- Council of Undergraduate Research (**Value = 8**)
- Association of State Colleges and Universities (**Value = 9**)

13. Have you ever attended a National Council of University Research Administrator sponsored professional development program? This includes attendance at regional or national meetings, participation in any NCURA sponsored workshops or professional development institutes, and/or any satellite video training programs you may have participated in. **(DEMO13)**

- Yes (**Value = 1**)
- No (**Value = 2**)

This question has conditions set in the Web based survey. If the respondent answers yes, they will be asked question 13a. If the respondent answers no, they will automatically go on to #14.

13a. Please rank your overall experience participating in NCURA sponsored professional development programs in terms of your own professional development needs? **(DEMO13a)**

- Extremely Positive (**Value = 1**)
- Positive (**Value = 2**)
- Average (**Value = 3**)
- Negative (**Value = 4**)
- Extremely Negative (**Value = 5**)

14. Have you ever attended a Society for Research Administrators International sponsored professional development program? This includes attendance at state, regional, or national meetings, participation in any SRA sponsored workshops or professional development institutes, and/or any SRA sponsored satellite video training programs you may have participated in. **(DEMO14)**

- Yes (**Value = 1**)
- No (**Value = 2**)

This question has conditions set in the Web based survey. If the respondent answers yes, they will be asked question 14a. If the respondent answers no, they will automatically go on to #15.

14a. Please rank your overall experience participating in SRA sponsored professional development programs in terms of your own professional development needs. **(DEMO14a)**

- Extremely Positive (**Value = 1**)
- Positive (**Value = 2**)
- Average (**Value = 3**)
- Negative (**Value = 4**)
- Extremely Negative (**Value = 5**)

Certification Section

15. Have you ever heard of the Research Administrators Certification Council? **(CERT15)**

- Yes (**Value = 1**)
- No (**Value = 2**)

16. Are you certified through the Research Administrators Certification Council as a Certified Research Administrator (CRA)? **(CERT16)**

- Yes (**Value = 1**)
- No (**Value = 2**)

This question has conditions set in the Web based survey. If the respondent answers yes, they will be asked questions 16a(1) through 16a(8), and questions 17 through 23. If the respondent answers no, they will automatically go on to question 24.

16a. Has being a Certified Research Administrator (CRA) been beneficial to your career in terms of the following:

16a(1) Having others more fully recognize your abilities to perform your job?
(CERT16a1)

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

16a(2) Increased your professional opportunities for contributions (for example, through speaking, making presentations, writing, contributing to a related professional society).
(CERT16a2)

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

16a(3) Increased your salary? **(CERT16a3)**

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

16a(4) Received a promotion(s)? **(CERT16a4)**

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

16a(5) Increased your job responsibilities? (CERT16a5)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

16a(6) Increased your prestige among superiors within your organization? (CERT16a6)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

16a(7) Increased your prestige among individuals within your organization? (CERT16a7)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

16a(8) Increased your prestige among individuals outside your organization? (CERT16a8)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

17. Do you feel more knowledgeable as a research administrator as a result of becoming certified? (CERT17)

- Yes (Value = 1)
- No (Value = 2)
- No Difference (Value = 3)

18. Do you feel more confident in your ability to do your work as a research administrator as a result of becoming certified? (CERT18)

- Yes (Value = 1)
- No (Value = 2)
- No Difference (Value = 3)

19. Was your employer supportive of your efforts to work toward a CRA designation? (CERT19)

- Yes (Value = 1)
- No (Value = 2)

20. Which one of the following best describes support provided by your employer while you worked toward the CRA designation? (CERT20)

- Fully supportive, all expenses paid (Value = 1)
- Fully supportive, majority of expenses paid (Value = 2)
- Somewhat supportive, but only minimal expenses paid (Value = 3)
- Supportive, but no expenses paid (Value = 4)
- No support at all (Value = 5)

21. How difficult was it to attain the CRA designation? (CERT21)

- Extremely Difficult (Value = 1)
- Difficult (Value = 2)
- Reasonable (Value = 3)
- Not Difficult (Value = 4)

22. How much time did you spend in preparing for the CRA examination? (CERT22)

- Less than 8 hours (Value = 1)
- 8 to 16 hours (Value = 2)
- 16 to 24 hours (Value = 3)
- 24 to 32 hours (Value = 4)
- 32 to 40 hours (Value = 5)
- More than 40 hours (Value = 6)

23. How frequently do you use the CRA designation following your name on your business cards, correspondence, etc? (CERT23)

- Always (Value = 1)
- Usually (Value = 2)
- Rarely (Value = 3)
- Never (Value = 4)

(Respondents who were prompted to answer questions 16a-23 will continue with question #29. Those who responded no to question 16 will be prompted to answer questions 24 through 28)

24. Have you ever contemplated attempting certification? (CERT24)

- Yes (Value = 1)
- No (Value = 2)

25. Why have you not attempted certification? (Check all that apply) (CERT25)

- I did attempt certification, but did not pass the exam (Value = 1)
- I am currently not eligible to sit for the certification exam (Value = 2)
- I don't believe there is any benefit for me to becoming certified (Value = 3)
- I don't think achieving certification is worth the time (Value = 4)
- I am afraid of failing the test (Value = 5)
- My employer will not support me in my efforts to become certified (Value = 6)
- Other, please explain (A drop down box will be provided) (Value = 7)

26a. Do you think achieving Certified Research Administrator status would be beneficial to your career in terms of the following:

26a(1) Others more fully recognize your abilities to perform your job? (CERT26a1)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

26a(2) Increasing your opportunities for professional contributions (for example, through speaking, making presentations, writing, contributing to a related professional society).
(CERT26a2)

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

26a(3) Increasing your salary? **(CERT26a3)**

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

26a(4) Receiving a promotion(s)? **(CERT26a4)**

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

26a(5) Increasing your job responsibilities? **(CERT26a5)**

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

26a(6) Increasing your prestige among superiors within your organization? **(CERT26a6)**

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

26a(7) Increasing your prestige among individuals within your organization?
(CERT26a7)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

26a(8) Increasing your prestige among individuals outside your organization?
(CERT26a8)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

27. Do you believe you would feel more knowledgeable as a research administrator if you were certified? (CERT27)

- Yes (Value = 1)
- No (Value = 2)
- No Difference (Value = 3)

28. Do you believe you would feel more confident in your ability to do your work as a research administrator if you were certified? (CERT28)

- Yes (Value = 1)
- No (Value = 2)
- No Difference (Value = 3)

Supervisory Section

29. Have you ever held a supervisory position in terms of evaluating, hiring, and/or terminating research administration professionals? (SUPER29)

- Yes (Value = 1)
- No (Value = 2)

This question has conditions set in the Web based survey. If the respondent answers yes, they will be asked question 30 through 33e. If the respondent answers no, they will be finished with the survey

30. When advertising for a research administrator position do you include a preference for Certified Research Administrators? (**SUPER30**)

- Yes (**Value = 1**)
- No (**Value = 2**)

31. When hiring a research administrator professional do you give preference to Certified Research Administrators? (**SUPER31**)

- Yes (**Value = 1**)
- No (**Value = 2**)

32. If you had the resources available would you negotiate a higher starting salary for a Certified Research Administrator? (**SUPER32**)

- Yes (**Value = 1**)
- No (**Value = 2**)

33. Do you perceive hiring a Certified Research Administrator would be beneficial to your organization in terms of the following:

33a. People within the organization more fully recognizing a CRAs ability to perform their job? (**SUPER33a**)

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

33b. Increased credibility of the employee within the organization? (**SUPER33b**)

- Strongly Agree (**Value = 1**)
- Agree (**Value = 2**)
- No Difference (**Value = 3**)
- Disagree (**Value = 4**)
- Strongly Disagree (**Value = 5**)

33c. Increased credibility of the employee outside your organization? (SUPER33c)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

33d. Increased professional contributions (for example, through speaking, leading training programs, making presentations, writing, and/or contributing to a related professional society). (SUPER33d)

- Strongly Agree (Value = 1)
- Agree (Value = 2)
- No Difference (Value = 3)
- Disagree (Value = 4)
- Strongly Disagree (Value = 5)

Completed Survey Statement:

Thank you for your time and dedication to improving the field of research administration by completing this survey.

APPENDIX B
INSTITUTIONAL REVIEW BOARD APPROVAL



Office of Research & Commercialization

January 18, 2005

Thomas Roberts, MPA
17430 Sterling Lake Dr.
Fort Myers, FL 33912

Dear Mr. Roberts:

With reference to your protocol # 2261 entitled, "Perceptions of Research Administrators on the Value of Certification" I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office.

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur. Further, should there be a need to extend this protocol, a renewal form must be submitted for approval at least one month prior to the anniversary date of the most recent approval and is the responsibility of the investigator (UCF).

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

A handwritten signature in cursive script, appearing to read 'Barbara Ward'.

Barbara Ward, CIM
IRB Coordinator

Copies: IRB File

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