FACULTY AND ADMINISTRATORS' JOB PREFERENTIAL
AND JOB SATISFACTION FACTORS AT
THE UNIVERSITY OF GUAM

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

by

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August, 1990
Santos, Robert D., **Faculty and Administrators' Job Preferential and Job Satisfaction Factors at the University of Guam.** Doctor of Philosophy (Higher Education), August, 1990, 211 pp., 35 tables, bibliography, 219 titles.

Research into job preference and job satisfaction addresses the agreement between individual and institutional values leading to job choice and job satisfaction. This research assessed ten job preference and ten job satisfaction factors at the University of Guam. Ninety-one faculty members and 32 administrators completed a two-page paired-comparison questionnaire. Demographic data were also collected.

Factors' hierarchy and valence positions were reported and subjected to "PCSTATS" program to determine significance among pairs. Significant differences existed in three of the four hypotheses measuring the job preferential factors: advancement, benefits, company, co-workers, hours, pay, security, supervisor, type of work, and working conditions; and job satisfaction factors: good wages, job security, interesting work, tactful disciplining, in on things, working conditions, management loyalty, appreciation, promotion, and sympathetic understanding. Additional findings were made using post hoc analysis.
Results indicated that administrators perceived others' preferences to be (a) pay, (b) advancement, and (c) type of work while faculty chose (a) type of work, (b) pay, and (c) advancement. In job satisfaction administrators selected (a) promotion, (b) good wages, and (c) job security, while the faculty chose (a) interesting work, (b) good wages, and (c) promotion. Self job preference factors chosen by males and females were (a) type of work and (b) pay with (c) advancement and (c) co-workers, respectively. The top three self job satisfaction factors chosen by males and females were (a) interesting work, (b) good wages, and (c) promotion.

Disagreement is evident between groups. It is recommended that the findings be used in the selection and retention of faculty members at the University of Guam.
ACKNOWLEDGEMENTS

The author wishes to acknowledge with special thanks and appreciation a number of people who gave special assistance, time, and consideration to the project. Appreciation goes to my wife, Elaine, for her love, encouragement and support, and a special love and thanks to my source of motivation, my children, Zane, Deylene, and Makao.

Valuable, endless assistance and guidance were provided by my major professor, Dr. John P. Eddy, and graduate committee members, Dr. Jack Watson, Dr. William A. Miller, Jr., and Dr. John T. Thompson.

A special thanks must go, also, to Dr. Bettye Myers, Dr. Dave Marshall, and Dr. Wilfred Leon Guerrero and staff at the University of Guam, especially Mr. Alfred G. Blaz, my able proxy, whose help made the completion of the study much less complex and time consuming. Thanks, also, to a great editor and friend, Ms Ann Gervasi.

Finally, loving credit goes to my parents, Joaquin and Carmen Santos, for their establishment and encouragement of my goals and drive throughout my life. Thanks to my brothers and sister for their support.
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CHAPTER I

INTRODUCTION

Research has been continuous on the utilization of leader behavior techniques and organizational behavior in institutions of higher education: universities, small colleges, and community colleges (Apps, 1988; Eddy et al., 1985; Cohen & March, 1974; Heyns, 1977; Kerr, 1980; Lahti, 1973; & Walker, 1979). Educational reform, environmental control, public health and welfare, information and communications technologies, and declining enrollments are among issues competing for financial and intellectual resources in the changing universities and society (Hass, 1987).

Acceptance of organizational changes has been difficult and time consuming in transition, while others have been less so (Mayo, 1945 & Michael, 1980). Examples of these changes include the impact of Title IX of the Educational Amendments Act of 1972 (Public Law 92-318) (Appenzeller, 1985), and in 1954 the Supreme Court decision in Brown v. Board of Education of Topeka, Kansas on the eradication of sex and racial discrimination. Furthermore, in 1983 the government released a report, A Nation at Risk, that profiled the American education system as being eroded by a wave of mediocrity (National Commission on Excellence in
Education, 1983). Moreover, in 1985 a report was issued by the Association of American Colleges, Integrity in the college curriculum: A report to the academic community, redefining the meaning and purpose of baccalaureate degrees. The university administrators have found themselves in a unique bipolar position: the public that supports academic excellence in public education through public funds and the orders of the courts to which they are legally required to adhere.

Expanding programs, social climate, and diverse personnel population surrounding university administrators are changing exponentially, requiring more versatility and greater data base in the integration of structural and behavioral management (Apps, 1988 & Gorton, 1987). American universities have seen changes during this era—an era of over 30 years. Higher education is going through an administrative revolution.

Changes are occurring in the university scene. The expanding integration of organizational and behavioral administration, knowledge, performance, and attitude, provided by the universities have resulted in progressive adaptations in disciplinary and academic culture and the need to adopt functional models for facilitating and accommodating processes and progress (Gaff, 1983).

Like any other institution concerned with the selection of quality faculty, job satisfaction and motivation, and
determination of job preferences as ingredients for job insight and identity, the University of Guam (UOG)—a formal institution founded in 1952—adheres to federal and local legislation and guidelines, legal aspects, academic affairs, and academic personnel (Carano & Sanchez, 1964 & Sanchez, 1987). The University of Guam, as an academic community with democratic latitude, sees itself as an integral part of various functions of internal and external agencies on its continued growth. Specifically, UOG adheres to the commitment to academic excellence through creative and functional leadership (McCauley, Joyce, personal communications, November 26, 1989). One approach for strengthening leadership effectiveness is to determine faculty job preferential determinants and job satisfaction factors in the working environment for job insight and identity.

The wave of selection for quality, competent higher education faculty members is an expected practice in institutions of higher education today. Institutions that succeed at selecting quality faculty are more resourceful than others by using a variety of strategies to recruit, encourage, and retain diverse faculty (Phillips, 1987). Recruitment strategies include establishment of position objectives, initial contact with candidate, initial candidate interview, reference contacts, evaluation of candidate, campus visit, decision to extend an offer, making
the employment offer, and post-recruitment activity. Consequently, the success of the academic institution depends directly on the fulfillment of psychological and physical contract and contributions of the faculty members. Job preference and job satisfaction of faculty is generally assumed as the underlying premise for harmony between educators, administrators, and institutions.

The influence of the natural multi-cultural setting, lifestyle, advanced technology, federal assistance and regulations, and geographical size and location have been the constant and critical variables for job decision for faculty members selecting Guam and especially for selecting the University of Guam (UOG). Do these variables on work environment affect attitudinal shift of educators' job satisfaction and career choice? Simply stating, people have been heard to say "why work in Guam?" or, for that matter, "why gain employment at the University of Guam?" These views of candidates and employed faculty should be of concern to that university and especially to the University of Guam.

Jurgensen (1949) explained that "they do much to establish and maintain good or poor public relations, and they make it easy or hard to build up an adequate pool of job applicants from which to select satisfactory employees" (p. 352). What do potential and existing faculty members want from their job? Referring to Jurgensen's (1978)
original (1947) and 30-year studies (1978), the following job preferential factors will be used for this investigation:

1. **Advancement** (Opportunity for promotion)
2. **Benefits** (Vacation, sick pay, insurance, etc.)
3. **Company** (Employment by company you are proud to work for)
4. **Co-workers** (Fellow workers who are pleasant, agreeable, and good working companions)
5. **Hours** (Good starting and quitting time, good number of hours per day or week, day or night work, etc.)
6. **Pay** (Large income during year)
7. **Security** (Steady work, no layoffs, sureness of being able to keep your job)
8. **Supervisor** (A good boss who is considerate and fair)
9. **Type of Work** (Work which is interesting and which you like)
10. **Working Conditions** (Comfortable and clean—no objectionable noise, heat, cold, odors, etc.) (p. 268)

The 1978 publication was the result of the study conducted over a 30-year period involving 57,000 public utility applicants. The applicants rated the importance of the ten factors that make a job preferable. Men and women differ in their preferences. The rank order of factors for men from high to low preference was security, advancement,
type of work, company, pay, co-workers, supervisor, benefits
hours, and working conditions. From high to low
preferences, women rated type of work, company, security,
co-workers, advancement, supervisor, pay, working
conditions, hours, and benefits. The changes of order of
importance over the 30-year period were inconsequential
except that there was a decline in the preferable importance
of advancement and security.

Good working conditions, feeling "in" on things,
tactful disciplining, full appreciation for work done,
management loyalty to workers, good wages, promotion and
growth with company, sympathetic understanding of personal
problems, job security, and interesting works are among the
factors what workers want from their job (Adler, 1988;
Lindahl (1949) evaluated job satisfaction by utilizing
Thurstone's (1927) psychometric approach (paired-comparison
technique) for the measurement of job satisfaction attitude.
Results showed that "wages are less important to the worker
than generally believed. Job security and good working
conditions seem to be important factors for the average man
on the job (p. 266)." Adler (1988) replicated the study of
Lindahl using the same factors to determine significant
attachment to determinants that influence job satisfaction
with faculty members. As evident from the results,
educators felt and indicated that "both interesting work and
job appreciation in the teaching profession (intrinsic factors) are considered more important components of job satisfaction in the teaching profession than those extrinsic factors, especially good wages" (p. 145).

According to Hersey & Blanchard (1982), people are driven by different satisfying needs, "No one person has exactly the same mixture or strength of these needs" (p. 41). What do faculty members want from their job? Are competitive wages (extrinsic factors) really important to provide job satisfaction; do the educators expect and demand more from a lifelong relationship of employment?

Are the job satisfaction factors discussed previously rated the same by faculty members and administrators at the University of Guam as shown by the studies by Adler (1988) and Lindahl (1949)? Do the administrators of UOG rate hierarchy and valence satisfaction determinants the same as do the faculty members? Is the order of job preferential factors in considering employment at the University of Guam consistent between administrators and faculty members? Do the administrators of UOG rate the preferential factors the same as the faculty members? Are the job preferential factors discussed previously rated the same by faculty members and administrators at UOG as shown by the studies of Jurgensen (1978), Hardin, Reif, and Heneman (1951), and Lindbom (1952).
A question that emerges is to what hierarchical and valence magnitude is the commonality and consistency of the administrators' and faculty member's job preferential determinants and job satisfaction factors for selection and continued employment at the University of Guam. In other words, what are the job preferential factors and job satisfaction determinants for job insight and identity for a particular higher education institution: the University of Guam.

Statement of the Problem

The problem addressed in the study is career preferential factors and job satisfaction factors of faculty members at the University of Guam for career insight and identity.

Purposes of the Study

The purposes of this study include determining and analyzing differences between faculty members' and administrators' career perception on job preferential and job satisfaction factors in what faculty members want from a job at the University of Guam. Furthermore, the study will determine the hierarchy and valence of each factor's rank and interval position.

To achieve the purposes, the researcher addressed the following questions to determine differences between groups:
1. Do the administrators of the University of Guam rank the job preferential factors different from the faculty members?,

2. Do the administrators of the University of Guam rate workplace satisfaction factors different from the faculty members?,

3. Do the male faculty members rate workplace preferential factors different from the female faculty members at the University of Guam?, and

4. Do the male faculty members rate workplace job satisfaction factors different from the female faculty members at the University of Guam?

The hierarchy and valence of each factor's rank and interval position will be determined with percentages.

Hypotheses

The following hypotheses were tested at the .05 level of significance:

1. There is no significant difference between administrators and faculty members on job preferential factors (addresses major purpose question 1);

2. There is no significant difference between faculty members and administrators on job satisfaction factors (addresses major purpose question 2);
3. There is no significant difference between male faculty members and female faculty members on career preferential factors (addresses major purpose question 3);

4. There is no significant difference between male faculty members and female faculty members on job satisfaction factors (addresses major purpose question 4).

Definition of Terms

For the purpose of clarification, the following terms are used in the investigation.

1. **Administrators**—This term refers to all full-time and part-time administrators to also include department directors, deans, and chairpersons (UOG Undergraduate and Graduate Catalogs, 1988-89).

2. **Faculty Members**—This term refers to full-time instructors, assistant professors, associate professors, and full professors (UOG Undergraduate and Graduate Catalogs, 1988-89); not including administrators.

3. **Paired-comparisons Technique**—This technique estimates the probability that a randomly selected subject will rank a particular object above another in all possible pairs for a given set (Thurstone, 1927).

4. **Job preference**—The values of individuals which are matched to the values of the institution when seeking for employment (Jurgensen, 1947).
5. **Job Satisfaction**—Positive emotional state resulting from the appraisal of one's job or job experience (Locke, 1976).

6. **Job (career) Insight**—How realistic people are about themselves and their careers and how accurately they relate these perceptions to their career goals (London & Mone, 1987).

7. **Job (career) Identity**—The extent to which people define themselves by their work (London & Mone, 1987).

8. **Job Content Factors**—involves items called "motivators" or "satisfiers" which include the task itself, achievement, recognition, responsibility, growth, and advancement (Herzberg, Mausner, & Snyderman, 1959 & McAfee & Champagne, 1987).

9. **Job Environment Factors**—involves items called "hygiene factors" or "dissatisfiers" which include company policy, supervision, working conditions, pay, relationships with peers and subordinates, status, and security (Herzberg, et al, 1959 & McAfee & Champagne, 1987).

**Limitations of the Study**

This study was subject to the following limitations:

1. A survey questionnaire sent through the mail was utilized.

2. A selected number of groups (faculty members and administrators) were considered.
3. All administrators and faculty members listed in the UOG undergraduate and graduate catalogs were used as a source for selection of subjects.

4. The University of Guam with student population of approximately 1,800 (Undergraduate Catalog and Graduate 1988-89) was selected.

5. Selected instruments yielded the necessary data for analysis.

6. The true beliefs of the participating administrators and faculty were reflected on each of the instruments utilized in the investigation.


Basic Assumptions

This investigation was based on the following premises:

1. The organizational leadership behavior of the University of Guam was similar to that found in higher education institutions in the United States.

2. The administrators and faculty members from the University of Guam who are requested to complete the survey instrument responded honestly concerning their job
preferential factors and job satisfaction determinants for career insight and identity.

3. Administrators and faculty members at the University of Guam appropriately provided preferential and satisfaction determinants or factors for implementation of information, requirements, and concepts for selection of quality faculty members for job insight and identity.

Significance of the Study

A review of related literature revealed that this investigation was not identical in purpose with any previous research: the scope, approach, and content of the present study of the University of Guam. Literature reveals separate studies on job satisfaction (Herzberg, 1959, 1966, 1968; Locke, 1976, & Weaver, 1980), job satisfaction factors (Adler, 1988 & Lindahl, 1949), and job preferential factors (Blumenfeld, et al. 1982; Hardin et al., 1951; Jurgensen, 1947, 1978; Lindbom, 1952; & Thornton, 1983). No studies, however, were conducted combining job preferential determinants and job satisfaction factors for job insight and identity at the University of Guam. Several studies that the investigator found particularly valuable in the development of the study are reported on the pages to follow.

Most faculty members of higher education institutions face major job decisions several times in their lives. For
example, this occurs when the educators are not satisfied with their job, when new opportunities emerge, when their administrators are not satisfied with their productivity, and when they change jobs within the institution. London (1987) reported that "employees' career preferences are guided by their interests, and they tend to make career decisions on the basis of these interests—that is, they choose occupations that match their interest patterns" (p. 19). Viega (1983) reported that job stage may affect what people value most from their job or from a job. During the formative time of their career, people are working towards establishing themselves which mean they prefer or want jobs to help them learn and develop (Lowther, Gill & Coppard, 1985). This self-expectancy will enhance their career mobility and marketability internally and externally from the institution (Clecak, 1982 & Janis & Mann, 1977). As the person's job experience matures, advancement in a job situation places a great deal of emphasis on a person's upward mobility through job satisfaction and job rewards (Kalleberg, 1977 & Lowther et al., 1985).

Tomorrow's leadership in higher education institutions is confronted with many inside and outside strategies that were either previously ignored or simply given minimal attention. For example, in the internal strategy the concern for organizational mechanism, definition of roles and resolution of conflicts, and satisfaction and motivation
require continued management provision for possible explanation of negative and positive pattern and direction for career insight and identity (London, 1987 & Van Sell, Brief, & Schuler, 1981). On the other hand, the external strategy requires the concern for and mapping of resources, both money and students, and the recruitment and retention of quality faculty members. The scope, however, of some of these influences is such that institutions of higher education, especially the University of Guam, no longer can financially afford to administratively deny their existence.

**Rationale for Research Significance**

Several reasons why this research was significant were as follows:

1. determine career preferential factors and job satisfaction factors for stronger job insight and identity,
2. connect educators' values with institutional values for higher job insight and identity,
3. connect educators' values with administrators' values for significant career insight and identity,
4. support faculty involvement in professional activities,
5. provide information of selection methods to prevent adjustment and adaptation problems,
6. identify faculty members who will deepen commitment to multi-cultural education (Boyer, 1988; Cole, 1984; Gold
et al., 1977; & Hirsch, 1987) for an ethnically and
linguistically diverse population through job insight and
identity,

7. help to make faculty's jobs challenging by
assigning teachers to important projects that require using
a variety of skills,

8. reward faculty for good performance,

9. let faculty know how well they are doing
(feedback),

10. minimize faculty attrition rate by understanding
what faculty members want from their jobs,

11. provide administrators' comprehension for
enhancement and facilitation of growth and development of
educators by knowing what they want from the institution for
job insight and identity (Bess, 1985),

12. identify administrator's role in making job
assignments and promoting people,

13. determine co-worker's level of cooperation,

14. determine job as a stepping stone to other career
moves,

15. determine opportunity for job promotion, and

16. provide competitive job salary.

Identification and selection of quality and competent
faculty members, including administrators—when independence
of thought, satisfaction, and motivation is nurtured—
enhances long-term quality education at the University of
Guam; the linkage of mission and performance through job insight and identity seems logical. Consequently, the commitment for excellent educators limits lamentation, dissatisfaction, and demotivation. Faculty members are interested in educational programs which contribute to the enhancement and development of competent students.

Effective human resource development, balancing tight budgets, centralizing decision making, achieving optimal enrollment and tuition revenues, and shifting academic priorities are the many reasons for a radical new style for effective higher education leadership. Given the increased responsibilities of higher education administrators in the last 15 years (Bess, 1985; Chalofsky & Reinhart, 1988; Ihlanfeldt, 1980; & Keller, 1983), this research was important to gather, analyze, and report data related to job preferential determinants and job satisfaction factors for job insight and identity at the University of Guam.
CHAPTER BIBLIOGRAPHY


CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The first two sections of this chapter cover the eventful history of the island of Guam and the University of Guam. The next three sections include the definitions of leadership, a description of the forerunner schools of management of job satisfaction—the schools of scientific management and human relations—and an illustration of these two schools in Herzberg's Two-Factor theory on job satisfaction. The final sections present the writings on job preference and job satisfaction for career insight and identity.

Brief Description of Guam

The Island of Guam sits in the most advantageous location in the Western Pacific Basin. The island lies at the southern end of the chain of islands called the Marianas or archaeologically known as the Mariana Archipelago (Freeman, 1951). Guam lies north of the Equator and east of the Prime Meridian: $13^\circ 28'$ North Latitude and $144^\circ 45'$ East Longitude and sits between the Tropic of Cancer and the Tropic of Capricorn. Upon examination of the Guam Visitors Bureau Island of Guam map, Guam is shown as commercially and strategically located 1500 miles southeast of Tokyo, Japan.
1,500 miles southeast of the Philippines, 3,100 miles northwest of Sydney, Australia, 6,000 miles southwest of San Francisco and 2,100 miles southeast of Hong Kong, near the mainland of Asia—the "Gateway to Micronesia" and "crossroads and hub of the Pacific" (see Appendix A). Guam, with a population of 106,000, is about 30 miles long, 4 to 8 miles wide, covering about 212 square miles (Beaty, 1968), and located in the Torrid Zone, known as the "tropics."

Furthermore, Guam is located west of the International Date Line (IDL) which means that countries located on the west side of IDL are 24 hours ahead of the countries on the east side of IDL (Beaty, 1968). Due to this time phenomena, Guam proudly claims that "America's day begins in Guam, U.S.A." This claim is the reflection of a "culture that has survived conquest, wars, typhoons, and plague—a culture that is always adapting, yet remains the same," according to Sanchez (1987).

This modern-day attitude of Guam stems from the fact that Guam—an American territory since 1898—played an important and undiminished role in our national defense (Nelson, 1940) positioned for air traffic, freight, commercial, and military advantages (Carano & Sanchez, 1964). The right to this claim is mirrored by the proud and enduring heritage of the Chamorros, a free and self-sufficient race of people (Sanchez, 1987).
Burney (1806) reported that centuries after the Chamorros settled the Mariana Islands, the first Western European explorer, Ferdinand Magellan, charted the Marianas under the authority of King Charles I of Spain. Magellan, a Portuguese navigator, discovered Guam March 6, 1521, while circumnavigating the globe. For over 150 years, while Spain held title to the island, Guam was a regular port of call for many adventurers—whalers, pirates, and explorers—including pioneers from all nations. Sir Francis Drake often made stops in Guam for supplies and fresh provisions.

Many significant events such as the Americanization of Guam in 1898, World War II, the Liberation of Guam on July 21, 1948, the Organic Act of Guam in August 1, 1950, and Guam under the elective governorship system in 1970 have given power to the people of Guam to enhance and facilitate their lives and the lives of their children.

Americanization—the rising of the U. S. stars and stripes over the island—of Guam began with the U. S. capture of Guam from the Spaniards in 1898. The first American governor, Naval Captain Richard P. Leary, appointed by President McKinley in 1899, gave the people of Guam direction towards a democratic governance by improving their physical, social, and educational lives. During his 11-month administration he had complete authority over all matters, civil and naval. Guam citizens, therefore, were not at liberty to control their government at this time.
For example, "All of the pre-war governors were naval officers" (Beaty, 1968, p. 239) and were appointed by the Presidents of the United States until 1970.

Garrison (1979) describes the self-sufficient status of Guam at this time by stating that:

... it could not be said that the present thrust toward economic and political self-sufficiency in Guam had any beginnings with the early years of Guam's American Experience. The island had been acquired by accident--as an afterthought in a war fought primarily for Cuba's independence--and was kept primarily as a naval station. Accordingly, the Anglo-Saxon concepts of political equality and the rule of law came slowly to Guam. The main thing in Guam for the first 30 years of this century was to keep the Navy's ships in good operating order ... (p. 47).

Guam now serves as a vital base for U. S. naval and air forces.

The outward bound movements of Guam toward strengthening its democratic identity and applicability continues. What did the neighboring world know about Guam? Not until December 8, 1941, did Guam get away from being only recognized as a backwater world with occasional port of call. Because of this, the tempo of lifestyle of the Guamanian was different from the Chamorro of the Americanization age and pre-war Guam. Thompson (1947), a
Princeton anthropologist, describes the sounds of multicultural life created at that time:

... like thousands before it, has passed in pre-war Guam. Nowhere else in the world is found quite the same medley of culture traits which fuse within the boundaries of this tiny tropic isle. Dramatic Catholicism from old Spain; spicy culinary arts and crafts from Mexico; bullock carts, carabaos, clothes and cockfights from the Philippines; public schools, politics and sanitation from America—all blend with survivals of the ancient culture to form the changing life of Guam (p. 35).

The thrust of innovations and events at this period gave the Guam people an entirely new culture. World War I was notable here chiefly because of the scuttling of a German ship, the Cormoran in 1914, in Apra Harbor and the internment of its crew—descendants of whom have long since been assimilated into the life and culture of the island just as were the earlier wandering Scots, Englishmen and Italians (Carano & Sanchez, 1964; Garrison, 1978). Changes continued with the establishment of the First Guam Congress by Governor Roy C. Smith on February 3, 1917. The congress was informed by Governor Smith that it was their duty to "consider and recommend measures for the improvement of the Island and welfare of its inhabitants" (James, 1946, p. 409).
The ability to predict was accurate in the case of Smith. Guam became known to the commercial aviation industry. Pan American World Airways was the first commercial airline to solo the transpacific route (Carano & Sanchez, 1964 & Garrison, 1974). Until the latter 30s, the Pan American World Airlines determined entirely commercial aviation history in Guam. The formidable "China Clippers" and eventually other amphibious planes made stops at the old Seaplane Ramp in Apra Harbor. The role of Guam, however, as an aviation transport hub was still a distance away: about 40 years. Although not recognized as a transport hub of the world, Guam obtained widespread recognition for commercial advantages and advancement through Pan American World Airways flights. Their planned transpacific services were to be the longest flights (i.e., 8,746 miles) over water; passenger, cargo, and mail were to be transported. The longest scheduled over water flight at that time was between Dakar, French West Africa and Natal, Brazil—a distance of 1,864 miles (Public Relations Department, 1955, p. 1). The thrust for the right for self-sufficiency moves on.

Though it is not a pleasant memorable experience and in remembering the devastating effects of the war for the people of Guam, World War II gave Guam a world-wide purpose as a regular port of call for military and commercial aviation in the Western Pacific region. Guam became strategically and commercially important for national
defense and economic advantages in this area. The undiminished role of Guam for our national defense positioned Guam for air traffic, freight, commercial and military advantages. Guam has become known as America's largest forward base in the Pacific and is strategic to the national defense of the United States and the free world in the Asian area. With the continuing crisis in the Philippines government, Guam becomes one of our most essential bases as a key to the Asian region.

Guam will never be the same as its pre-war culture and lifestyle. Its overnight growth through adverse events and military government has provided the Guamanian people the "democratic voice" necessary for reconstruction of cultural spirit: free and self-sufficient. The rebirth of Guam came after being recaptured from the Japanese in August 12, 1944—an occupation that had lasted for 2 1/2 years. Indeed, the people of Guam were liberated from the Japanese, but for the Chamorros liberation was still ahead in terms of political rights. The fast-paced reconstruction and redefinition of Guam's role in the Western Pacific basin by the military government created liberation setbacks.

In those days, the government of Guam was under the administration of Naval Governors appointed by the President of the United States. The setbacks were temporary. The leaders recognized the rights of the people thus giving them the attempt to gain the real political identity for self-
government and civil rights. Governor Pownall, at the
dedication of the Guam Congress Building, Liberation Day,
July 21, 1948, read a quote from a letter from President
Harry S. Truman which illustrated the meaning to self-
government: "this modern home of Congress is symbolic of
the New Guam which is rising from the devastation of war to
flourish in an atmosphere of prosperity, liberty, and
justice" (Beaty 1968, p. 294).

The civil rights privileges for the Guamanians were
controlled because no constitutional documents were written
for direction for Guam democratic government (i.e.,
citizenship privileges, self-government through election,
and governmental autonomy from the Naval Department to the
Department of Interior). In 1949, a sub-committee of the
Public Land of the U. S. House of Representatives
investigated, formatted, and recommended the need and
changes for active democratic governmental participation in
Guam. The Organic Act of Guam—patterned after the Bill of
Rights of the Constitution of America—was signed by
President Truman in August 1, 1950, a bill passed by the
81st U. S. Congress; for instance, it guaranteed freedom of
religion, speech, press, and declared no person may be
deprived of his or her life, liberty, or property without
due process of the law.

The promise under the treaty after the Spanish-American
War was kept—the eventual civil government in Guam. For
example, in 1962, the military lifted the Naval Clearing Act which allowed other ethnic groups to make Guam their home (Guam Visitors Bureau, 1982). Sanchez (1987) stated that Guam:

... ended 278 years of military control on Guam and her people under three governments: Spanish from 1672 to 1898; American from 1899 to 1941; Japanese from 1941 to 1944; and American from 1944 to 1950. It also ended nearly 50 years of fervent appeal for United States citizenship on part of Guamanians. Most important of all, the Act opened a new social, political, and economic era for the territory of Guam (p. 304).

The root for American democracy is liberation. Guam tested and ensured its liberation by government of the people through governmental accountability. The people of Guam wanted and needed to continue the image of a free and self-sufficient race. This expectation can only be achieved and experienced by being responsible for making it work for themselves.

As discussed above, many changes have taken place over the years for Guam's democratic visibility, growth, and rights. The people, however, were still hindered in forward movements in autonomy and civil government due to the U. S. Commander in Chief's continued appointments of naval governors. The right to voice and follow-through opinions was complimentary to the people of Guam because the right to
make decisions for the island was denied. The denial for gubernatorial election ended in November, 1970 (Sanchez, 1987) 20 years after the signing of the Guam constitution, the Organic Act. The right for gubernatorial elections brought a major shift in the island's political, economic, and social life. In Sanchez's book, the 1971 inaugural speech of the first elected Governor Carlos G. Camacho, showed distinct possibilities Guam has to offer. Camacho stated that the changing and challenging life of Guam signals

... an end of Federal paternalism and the birth of a greater measure of home rule . . . . Governor Camacho envisioned 'Guam as the primary economic chain linking the continental United States with Pacific and Asian countries, all pursuing a greater share of the world's wealth . . . .' Guam . . . is the communication and transportation center of the Western Pacific . . . The Pacific is the world's last frontier (p. 362).

Brief History of the University of Guam

Education has come a long way since World War II, especially for post-secondary education—a higher education. The University of Guam—a public Land-grant institution of higher education founded in 1952—is located on a 120-acre site that overlooks Pago Bay with a panoramic view of the Western Pacific. The University of Guam—once known as the
Territorial College of Guam—was created to serve the needs of the people of Guam and the Western Pacific areas as broadly as possible. The establishment of this institution of higher learning marked the advancements of the island's educational system and prosperity.

The need for an institution of higher education in Guam had long been recognized both in Guam and in the Western Pacific region by the people of Guam—both local and military. Through the influence of the high educational standards of the military, the Guamanians recognized that values abounded in education. Postwar, chaotic conditions and critical shortages of college-degreed teachers, however, plagued the outward educational growth of the people and the island. The need for well-trained Guamanian and other teachers in educational areas was in order and was especially true in the field of education (Carano & Sanchez, 1964). In an attempt to minimize this situation the Department of Education in 1946 established a teacher preparatory institution called Adelup Point Normal School. Due to inadequate enrollment management and too-selective admission standards, this school closed in 1947 (Department of Education, 1951 & Carano & Sanchez, 1964). The vision for growth through education was the primary concern with the people—the trek continued.

The hope and interest for a higher learning institution in Guam persisted. The vacuum created by the closing of the
normal school was filled and continued with educational connections with the University of Hawaii in 1946, 1947, and 1948, the University of California in 1951, and the Ohio State University in 1952. The developmental contributions for higher education in Guam by these state-side model universities provided excellent foundation for the modern-day University of Guam. The University of Hawaii provided and conducted summer sessions that would allow both (a) college credits and (b) credits leading towards graduation from the granting university: the University of Hawaii (UOH). University of Hawaii assigned as many as five professors for each session. In 1949 UOH summer sessions terminated, and in the same year the Government of Guam offered UOH a 1-year contract for educational services on the Island. The offer or proposal was denied due to financial disagreement and fear of financial burden upon which higher education was temporarily ceased on Guam.

The University of California (UOC), in 1951, and the Government of Guam made arrangements for in-service programs for teachers. This educational advancement was made possible by the cooperation of the military officials whose existing contract with UOC was still operational. In September, 1951, classes began. Although 126 teachers were registered, the Government of Guam was secondary in control of the program or staff due to the original educational contract with military personnel rather than the government.
This restriction limited course availability for the needs of local educators. The program, however, continued to attract teachers until the establishment of the Territorial College of Guam in 1952.

The long recognition for the need for higher learning became a reality with the approval of the Guam Legislature in 1952. The Territorial College of Guam was established which served to mark the advancement of Guam's educational system. Advancement, however, does not become a reality without comparative analysis of strengths and weaknesses of the university to other programs. To move the college ahead, Dr. Jose R. Palomo, first Guamanian Director of Education, searched for model programs for expansion of the college. In this case, the development of a junior college was Dr. Palomo's initiative for higher education in Guam. After in-depth review of program leaders, Ohio State University contracted to undertake the project. Carano and Sanchez (1964) reported the following agreed terms of the project:

1. The College of Education [of Ohio State] will cooperate with the staff of the Department of Education of the Territory in the development of educational programs at the college level for the preparation of elementary school teachers for the Territory and will assist in the evaluation and modification of the program as it develops.
2. The College of Education will select and release at least one staff member at a time continuously throughout a five-year period.

3. After consultation with the Director of Education of the Territory and Dean of the College of Education will designate one staff member of the College who will be nominated to serve under the Director of education of the Territory as Co-ordinator of Teacher Education and Higher Education (pp. 429-430).

This synopsis of the agreed terms between the Government of Guam and Ohio State University gave the Guamanians increased opportunities for higher education in Guam which also gave extended and formidable off-island collegial opportunities.

The work and organization of the Territorial College was directed by Dr. Edwin E. Lewis—Ohio State's first coordinator of higher learning in Guam. The primary purpose of the college was to prepare public elementary school teachers; in other words, emphasis was on courses for teacher-education candidates. In June 30, 1952, the Territorial College of Guam—now the University of Guam—opened its doors. The number of applicants was small (i.e., 191), but the significant few who were accepted (i.e., 110) represented the advancement necessary for the Island. The first year of the college's operation was filled with exploration and trials. As reported in the Department of
Education of Guam's "Annual Report" (1952), Palomo and Lewis suggested changes when they wrote:

The new college is, in essence, a Community College created to serve everyone in Guam and the Western Pacific area who needs and desires to extend his or her education beyond high school graduation and others who need short-time courses for vocational and self-improvement. Though feeble in its present offerings and lacking in its immediate facilities, it will expand rapidly in its curriculum, in the quality of its instructional staff, and in the adequacy and convenience of the library and laboratory equipment.

In the academic year 1953-54, the new director, Dr. John S. Haitema also brought out the importance of a community-college higher education concept:

The community-college concept is a point of view which has been gaining acceptance in the States and became the basis for the expansion of services and program which took place here. This concept is based upon the proposition that a local college should provide any type of education or training that is desired by groups of adults in the community which the staff is able to provide and the community able to support. Under this philosophy the community college offers everything from college credit courses to reading and writing, high school courses, general adult education, trade and
apprentice training—in short, any type of instruction which can be provided (p. 21).

In 1953, adult education was added to the college's curriculum; a library was also established. By the academic year 1955, the elementary teacher program attracted 57 students which also led to an associate of arts degree—a 2-year academic program. Furthermore, transfers of Territorial college credits to stateside colleges and universities (i.e., 90-100) was made possible by the arrangement of Ohio State University. According to Carano & Sanchez (1964), Ohio State University made the following agreement:

The College of Education, through the Entrance Board, will establish a basis for evaluating credit earned by students in the institution to be organized in the Territory, and in doing so will take full cognizance of the service of the College of Education personnel in the Territory and of the responsibility which they carry for selecting instructors and maintaining high academic standards. The College of Education will attempt to facilitate the transfer of credit, up to a maximum of 96 quarter hours, for students from Guam who wish to continue their college work toward the completion of a degree in an American institution (p. 432).
The contract in 1957 was modified in that the college was willing to be a self-governing institution. This was evident by the appointment of the first Dean of the College—Dr. Pedro C. Sanchez—by the Director of Education of Guam. In addition, Ohio State University agreed to help the college for 3 years by sending two consultants for the first year and one for each year thereafter. By 1959, the college was fully accredited as a community college by the Western College Association. It became a 4-year institution in 1961, and Dr. Sanchez—coauthor of the "Complete History of Guam" book—was appointed the first president of the college.

In September, 1958, the new Territorial College was moved to its new and modern plant site in Mangilao overlooking Pago Bay. From its start as a teacher-training college, the college has expanded both in program and enrollment. In short, as written in the 1989-90 undergraduate catalog the University of Guam is:

the major institution of higher education in the Western Pacific. It is a land-grant institution accredited by the Western Association of Schools and Colleges.

The University's history dates back to June 1952, when the island government established the Territorial College of Guam as a two-year teacher-training school under the Department of Education. The College,
located on a high school campus in Mongmong, had an initial enrollment of approximately 200 students, most of them experienced teachers, and staff of 13.

In 1960, the College moved to the present campus in the central district of Mangilao where a two-story classroom building and a library had been erected. The College had, by that time, expanded its academic programs and enlarged its staff and faculty in order to keep pace with students needs and the steady increase in enrollment.

The decade of the Sixties was marked by significant developments. In 1963, administrative control of the college was transferred from the Department of Education to a five-member governing Board of Regents. In that year also, and again in 1965, the College was accredited as a four-year, degree-granting institution. A plan for the establishment of three undergraduate schools was implemented in the fall of 1967. The following year, on August 12, 1968—four months after its accreditation was extended to the maximum five-year period—the College was renamed the 'University of Guam' by an Act of the Legislature.

... The University of Guam reached another milestone on June 22, 1972 when it was designated a land-grant institution by an Act of the U. S. Congress.
In March, 1974, the Board of Regents created the College of Agriculture.

Administrative autonomy was granted to the University with the enactment on October 4, 1976, of Public Law 13-194, 'The Higher Education Act of 1976,' which became effective on November 3, 1976 (pp. 9-10).

In his 1972 State of the University speech, President Sanchez sent the message that the University of Guam "is part and parcel of the community and fully responsive to it, moving it from the periphery of Guamanian life where it is now and placing it clearly in the center of the Territorial scheme of things where it will play a vital role in the development and growth of the territory" (Glimpses of Guam, 1974, p. 134). Sanchez also stated that the University of Guam will serve and be known as the "Community University" in the Territorial scheme in the Western Pacific area.

Today, the University offers courses leading to a baccalaureate degree in education, management and administration, health, medical and social services, business and technical careers, and biology and ecology (see Appendix A). In addition, the University of Guam offers graduate work in the following: (a) Master of Arts, (b) Master of Business Administration, (c) Master of Education with specialization in administration and supervision, counseling and guidance, elementary and secondary education, reading, and special education resource
consultant, (d) Master of Public Administration, and (e) Master of Science Biology (University of Guam undergraduate and graduate catalogs, 1989-90).

The mission of the University of Guam, a public Land-Grant institution, is to provide higher education programs for the people of Guam and the Western Pacific island communities, including undergraduate programs that build upon the Western Pacific's unique and varied cultural traditions and offer career opportunities together with a fundamental liberal arts education; research and graduate programs that are responsive to the specific needs of Guam and other Western Pacific island communities and contribute to their economic growth and stability; and community service programs that promote intercultural interaction, societal development, and personal improvement (Graduate Bulletin, 1988-89, p. 12).

The University has developed into a center of American higher education for the Western Pacific region. In the Glimpses of Guam (1974), it was reported that the:

. . . central focus of this Community University according to President Sanchez is 'the development of human beings who can cope with their life problems and become effective participants in society,' in particular the development of a 'sense of vocation and a level of competence in careers that will enhance
their ability to discover themselves and contribute to
the advancement and prosperity of Guam' (p. 134).

The University of Guam, a public land-grant
institution, fits the changing social and economic patterns
of the expanding Western Pacific. The Land-Grant Act
addressed the need for a new and vigorous type of education
to teach the finer points of agriculture, manufacturing, and
military science and tactics (Eddy, 1957 & Schafer, 1902).
It brought equality of education to the industrial classes.
It provided liberal and vocational education, but each not
at the expense of the other (Anderson, 1976, Brubacher &
Ruby, 1968, & William, 1979). Without this act or similar
legislation the educational system in Guam might be
different today. University of Guam receives federal funds
in lieu of land endowment and money to help support the
The military also gains from the educational benefits of the
land-grant act through a more educated public and through
the university's military science program instilling values
in the interest of national security.

In keeping up with the social, economic, and political
patterns of the Western Pacific and federal paternalism,
Guam, especially the University of Guam (UOG), reached
higher heights with government by the people through
creative and functional leadership. The University of Guam
can not be the University of California at Berkeley of the
Pacific nor should it aspire to be, but all higher education institutions, colleges, departments, and individuals can strive continuously to reach higher heights than what they are today. The Island of Guam and especially UOG have responded in this outward and upward direction by being recognized as the center of American higher education for the Western Pacific region. Examples of this direction is in its (a) job responsibilities which include at all levels from instructor to professor teaching, community service, and research, (b) recruitment budget increase during the last 5 years to 1989 of 48%, and (c) personnel selection from a wide demographic origin spanning the United States (49%), Canada (3%), Guam (47%), and New Guinea and Micronesia (1%) (Blaz, 1990). Higher education in a learning society needs all the talent it can get to improve its effectiveness in meeting the challenges it faces now and in the future by provision of strong leadership (Apps, 1988 & Gaff, 1983).

The University of Guam is not just an institution. It is not a business. It is not just a financial entity. It is a place where students, people, and communities can respond to the invitation and service from the community of scholars. That response enables the university to provide significant assistance to the intra- and inter-communities needs in the Western Pacific region. For over 37 years, the university has been developing and refining programs that
maximize the benefits in all communities—local, military, neighboring islands, and countries.

Definition of Leadership

One of the most scientifically studied and controversial variables of the management process is leadership (Ivancevich & Donnelly, 1970 & McCall & Lombardo, 1978). This controversial subject is similar in the setting of higher education. Consequently, there are numerous different theories of leadership espoused by both researchers and practitioners (Bass, 1981).

The study of leadership of human activity is an art of the past. According to Bass (1981), the "discussion of the subject will be found in Plato, Caesar, and Plutarch, just to mention a few from the classical era. The Chinese classics are filled with hortatory advice to the country's leaders" (p. 5). In addition, in citing various anthropological reports on primitive groups in Australia, Fiji, New Guinea, the Congo, and elsewhere, Smith and Krueger (1933) concluded that leadership is a universal phenomenon which occurs among all people regardless of culture. Leadership, therefore, is a universal phenomenon that appears to be a complex or sophisticated concept.

Complex because the concept has a different definition to different people (Yukl, 1981). Enochs (1981) stated "... leadership is like beauty: It is difficult to define or
describe, but you know it when you see it" (p. 178).

Voluminous research has shown that leadership has been defined according to the researchers individual perspective and aspect of the dimension of most interest to them. The disagreement in this term is caused by the variation of leadership concepts such as authority, power, responsibility, supervision, management, and administrative control in describing the same term. Stogdill (1974a) concluded that "there are almost as many definitions of leadership as there are persons who have attempted to define the concept" (p. 7). McCall and Lombardo (1978) gave three reasons for this definition disagreement:

1. the number of unintegrated models, theories, prescriptions, and conceptual schemes of leadership is mind-boggling;
2. much of the literature is fragmentary, trivial, unrealistic, or dull; and
3. the research results are characterized by Type III errors (solving the wrong problem precisely) and by contradictions (p. 3).

However, "there is sufficient similarity between definitions to permit a rough scheme of classification" (Bass, 1982, p. 7). Determining the appropriate method of grouping activities and resources in the organizing process is the function of leadership or administration.
Eddy et al. (1985) have reported that "A person might want to develop a matrix of styles depending upon the need and circumstance of the given situation" (p. 42). In other words, according to Hollander (1978), leadership is a process, not a person, although it depends on a leader's legitimacy (i.e., appointment, election, and emergence).

The processes listed by Gulick and Urwick (1937) are planning, organizing, staffing, directing, coordinating, reporting and budgeting. The process of leadership involves a social exchange between the leader and the follower. It implies congruency between the objectives of the leader and the led. Thus, administration is that "dynamic leadership that marshals economic, technical, and human resources and motivates professional spirit and cooperative effort towards fulfilling the goals of the organization" (Horine, 1985, p. 2). Frost and Marshall (1981) state that "administration consists of the leadership and guidance of individuals, the procuring and manipulating of resources, and the coordinating of many diverse efforts so effective progress can be made toward the achievement of the goals and purposes of an organization" (p. 1). Empirical studies suggest that leadership or administration is a dynamic process which reveals the following elements (a) achievement of objectives and goals, (b) coordination of effort, (c) effective utilization of resources, (d) involvement of people, (e) motivation, (f) instructing and supervising, (g) leading,
(h) commitment to the mission, and (i) facilitation of education (Bass, 1981; Frost & Marshall, 1981; Likert, 1961; & Stogdill, 1968, 1974a,b).

Administration is leadership (Hodgkinson, 1983, p.195). Higher education administration, similar in organizational processes and functions to other forms of corporate management, contends to incorporate the concept of a meaningful pattern of leadership. There is a burgeoning science and technology of administration which cuts across many fields (Campbell, 1977, p. 23). Gross (1964) developed a category of purposes which are common in all organizations. He states:

organizations aim at (1) satisfying human interests, of both members and non-members; by (2) producing services or goods with (3) an efficient use of scarce inputs; by (4) investing in their own viability; (5) mobilizing the resources needed as inputs, and doing all these things (6) in conformance with certain codes of behavior; and (7) in a rational manner (p. 276).

The process of influencing the activities of human behavior and effort defines and achieves ends through a given situation (Hodgkinson, 1972 & Horine, 1985). Burns (1978) defined leadership as leaders inducing followers to act for certain goals that represent the values and the motivations--the wants and needs, the aspirations and expectations--of both leaders and followers (p. 19). Koontz
and O'Donnell (1972) described leadership "as the art of inducing subordinates to accomplish their assignments with zeal and confidence" (p. 57). "Zeal" reflects order, earnestness, and intensity in the execution of work; "confidence" reflects experience and technical ability. These definitions and terms associate the leader distinct from the group, but also a part of the group. The leader performs to help an individual or group achieve goals and/or objectives with the maximum application of capabilities, but never losing his or her identity as the force behind the accomplishment of the goals. Wallace and Szilagyi (1982) reported that "leadership is a process involving two or more people in which one attempts to influence the other's behavior toward the accomplishment of some goal or goals" (p. 149). Stogdill (1974a) reviewed and analyzed over 3,000 books and articles concerning leadership and suggested the following 11 definitions of leadership:

1. a function of group process
2. personality or effects of personality
3. the art of inducing compliance
4. the exercise of influence
5. a form of persuasion
6. a set of acts or behaviors
7. a power relationship
8. an instrument of goal achievement
9. an effect of interaction
10. a differentiated role

11. the initiation of structure (pp. 7-15).

Effective leadership, therefore, attains goal achievement through interaction and influence, causes change in structure or behavior of groups, organizations, or communities, strength of personality, and induces compliance. Lassey (1976) stated that all of these critical variables depend on time and circumstance.

From the definition of leadership, Hersey and Blanchard (1982, p. 83) stated that "the leadership process is a function of the leader, the follower, and other situational variables--L = f(l, f, s)." Weber (1972) described leadership as the democratic control which must be stated as a formulation of shared responsibility. Administrators should be skilled in discovering attitudes, beliefs, and commitments (Campbell et al., 1977; Gorton, 1987 & London, 1987). It is, therefore, necessary that university administrators continue to select quality faculty, and to provide positive social climate and job satisfaction, and to develop human resources to the fullest extent possible (Gaff, 1983; Knowles, 1970; & Lahti, 1973).

The similarity of leadership definitions in a social context is summarized by the following: (a) Koontz and O'Donnell (1972) "leadership is influencing people to follow in the achievement of a common goal" (p. 435); (b) Tannenbaum, Weschler, and Massarik (1959), it is in the
communication process that interpersonal influence is exercised in a situation toward the attainment of a specialized goal or goals; and (c) Terry (1960) "leadership is the activity of influencing people to strive willingly for group objectives" (p. 493). Hersey and Blanchard (1982) cautioned, however, that any time an individual is attempting to influence the behavior of someone else, that individual is the potential leader and the person he or she is attempting to influence is the potential follower, no matter whether that person is the boss, a colleague (associate), a subordinate, a friend, or a relative (p. 83).

Consequently, higher education administrators or leaders should be skilled in discovering attitudes, beliefs, and commitments (Apps, 1988; Campbell, Bridges, & Nystrand, 1977; Gaff, 1983; Gorton, 1987; London, 1987). However, it is important to recognize that:

it is quite unlikely that there is a single basic pattern of abilities and personality traits characteristic of all leaders. . . . The requirements for successful . . . leadership are different from those for industrial management or military or educational leadership.

Even within a single institution such as industry, different circumstances require different
characteristics. Comparisons of successful industrial leaders in different historical periods, in different cultures, in different industries, or even in different companies have made this fairly obvious (McGregor, 1960, p. 16).

This is a conflict of values and attitudes of different individuals. Value is a belief in action (Francis & Woodcock, 1990, P. vii). Values, then, are basic, often neglected or misunderstood components of shaping human behavior. It allows administrators and employees choices about what is good or wrong, normal or abnormal, or important and unimportant. One ultimate truth about values is that they change over time and from one generation to another. Research shows that values such as self worth, leisure, and greater participation have become increasingly important. According to opinion polls conducted by the firm of Daniel Yankelovich (1978), "A new breed of Americans born out of the social movements of the sixties and grown to major proportions in the seventies hold a set of values and beliefs markedly different from the traditional outlook" (p. 47). This same dramatic change in values was also evident in the 1930s and continues to current eras. These value changes shifted organizational behavioral studies and thinking from scientific management to human relations.
Forerunner Schools of Management in Job Satisfaction: Scientific Management and Human Relations

The multi-cultural setting, lifestyle, personnel relations, competitive wages, security, and geographic location and size are among the critical variables for job decisions (i.e., job insight or identity) for potential and continuing faculty at the University of Guam (UOG). Do these job-content and job-environment variables affect the decision of educators' job choice or provide job satisfaction? Simply stated, people have been heard to say "why gain employment at the University of Guam?" or, for that matter, "why work in Guam?"

Personnel relations, security, benefits, working conditions, wages, achievement, recognition, and other such factors play an important role in job preference and job satisfaction. Do these job content and job environment factors have a strong bearing on satisfactory selection of faculty, and does determination of insight into workers' wants have an important bearing on job satisfaction?

Money is a major incentive in our society. It appeals to leaders or administrators as an employee incentive because it is concrete and easily manipulated. Are economic reasons (extrinsic) sufficient for job preference and to provide job satisfaction, or is job satisfaction or job choice an affective (intrinsic) response of the worker to his or her job? The central problem is defining what
motivates people to seek employment and to continue working interest at the University of Guam. In other words, what are the factors considered important by applicants; and what factors are considered greater for job satisfaction on the part of the faculty? The knowledge of these intrinsic and extrinsic values that are considered to be important will assist selection of faculty members and help arouse and retain interest in the job. For this reason, educational administration places a strong emphasis upon the importance on satisfactory selection of faculty and arousal and retainment of workers' interest which are parameters that constitute job satisfaction (Duncan, 1989; Campbell & Campbell et al., 1989; Breckinridge, 1976; Erickson, 1977; Goodlad, 1978; & Netzer et al., 1970).

"Positive emotional state resulting from the appraisal of one's job or job experience" is the definition of job satisfaction as defined by Locke (1976, p. 1300). Adler (1988) stated that "the concept of job satisfaction reflects an affective evaluation of all the aspects of a particular job. This includes all those tangibles factors such as good wages and job security and all those intrinsic variables such as interesting work and appreciation of one's performance" (p. 146). If the parameters of job satisfaction can be identified, then administrators can implement techniques that can ameliorate the conditions of the workplace through job satisfaction.
An important determinant of a leader's behavior concerning his or her followers is the assumption that he or she makes about an employee, and especially how he or she assumes a person to be motivated. In other words, what gets behavior started? How is it directed, and what can administrators do to arouse and sustain appropriate employee behavior? Motivation is a primary dimension of job performance and the literature contains many different theories (e.g., Herzberg's Two-Factor theory, McClelland's theory, Vroom's Expectancy theory, Equity theory, and Maslow's theory). "Two of the earliest attempts to systematically examine behavior were scientific management and the human relations movement, and these two schools of thought are often considered the major forerunners of modern organizational behavior" (McAfee & Champagne, 1987, p. 6).

The first of the two major forerunners of modern organizational behavior that describe the parameters of job satisfaction is found in the research of Frederick Winslow Taylor (Duncan, 1989 & Taylor, 1911). He is known as the father of scientific management (SM) or work study. Popularized during the first years of this century, scientific management dealt almost exclusively with the interaction between a person and his or her job in terms of rationality, efficiency, and standardization (Duncan, 1989 & McAfee & Champagne, 1987). Taylor searched for the "best
way" to do the job. It emphasizes careful planning and organizing of tasks along with the use of technology.

Continued attention to efficiency and productivity in industries, business, and other institutions, scientific management became the precursor of today's task (job) design concepts and principles such as job specialization, job enlargement, job rotation, and mass production (Griffin & Moorhead, 1986). In addition to paying close attention to job designs, Taylor also focused on motivating workers to perform at their highest possible level.

Assuming that all workers are economically motivated, Taylor developed a scale of financial incentives and rewards for managers to use to motivate employees who have achieved assigned work goals. Thus, better job-environment conditions and increased workers' interest through economic self-interest would determine job satisfaction. This assumption or rationale explains that job satisfaction or working interest is aroused and retained through physical needs or extrinsic rewards: the physical-economic theory (Roethlisberger & Dickson, 1939; Duncan, 1989; & Taylor, 1911). Scientific management quickly became a mainstay of American business thinking and is still used in today's industries and businesses and also in education. For example, the test for efficiency and consistent behavioral patterns are still part of today's educational testing: standardized and objective testing (Allen, 1979). Testing
and measuring also serve as a motivational technique in education through immediate feedback (e.g., formative and summative evaluation) (Ebel & Frisbie, 1986 & Bloom et al., 1971).

Events—effects of World War I, safety and health in the workplace, mechanization replacing manpower, and specialization—occurring as early as 1900 and culminating in the late 1930s drastically altered man's and woman's view of himself and herself, his and her organization, and his and her environment. Scott (1969) and Wren (1972) reported that individualistic optimism of the 19th century slowly gave way to an era of conflict, called the Period of Collision. The collision effect resulted from "environmental conditions which draw people into inescapable proximity and dependency on one another" (Scott, 1969, p. 48). Coffey, et al. (1975) stated that:

under twentieth century conditions of constant change there has been an emergence of human sciences and a deeper understanding of man's [and woman's] complexity. Today, integration encompasses the entire range of issues concerned with incentives, rewards and motivations of the individual, and how the organization succeeds or fails in adjusting to these issues. In our society, where personal attachments play an important role, the individual is appreciated and there is
genuine concern for his [or her] well-being . . . (p. 288).

The leaders and social scientists began to appreciate the consequences (e.g., great depression, increased unemployment rate, and low national morale) of the changing and learning society of this era and also the similar problems accompanied by the use of the scientific management approach. This mechanistic method of management showed that workers performed routine work among millions of other workers, but the situation was not all satisfactory.

In the 1920s and early 1930s, the trend started by Taylor was to be replaced at center stage by the "human relations" movement (Hersey & Blanchard, 1982 & Trahair, 1984). The human relations movement grew out of a series of research studies conducted from 1927 to 1939 by Elton Mayo and his associates at Western Electric's Hawthorne plant located in Chicago, Illinois (Geber, 1986; Mayo, 1933; & Roethlisberger & Dickson, 1939). The studies were originally undertaken to investigate the relationship between productivity and physical conditions. The objective of the studies was to determine the monotony and fatigue effect on productivity and to seek variables in work conditions that can control the productivity. In other words, they started out to study the effects of illumination, ventilation, and rest intervals on workers' productivity. After a few a years of experimentation,
however, it was observed that morale and motivation factors obscured the effects of illumination, ventilation, rest periods and the other factors being investigated and became known as the "Hawthorne effect." These studies showed conclusively and quantitatively that workers were responding to SM techniques by restricting productivity to levels that employees felt to be appropriate (Likert, 1955). In other words, the inner human organization such as feelings and attitudes profoundly effected performance. A principle of employee motivation was revealed when Mayo discovered that the social atmosphere developed in the experiments counteracted fatigue and monotony (Geber, 1986 & Trahair 1984). Francis and Woodcock (1990) reported that "progressive managers adopted a more complex view of human beings, realizing that feelings and willpower played a significant and sometimes crucial role in influencing productivity" (p. 6). Consequently, the assumption of the human relations movement was that management concern for the worker would lead to increased satisfaction which would, in turn, result in increased performance. While wages and working conditions were important to workers, they placed second to what Mayo called a "method of living in social relationship" (Miller & Form, 1964). The Hawthorne studies (Mayo, 1933 & Trahair, 1984) showed that social functions of the work situation along with appropriate employee-management relationships were the critical issue in job
satisfaction for employees. Thus, the school of human relations management was born. The "Hawthorne effect" integral in the world of organizational behavior (e.g., training, motivation, communication) is interpreted as everything from rewards gained from displaying concern for employees, to "big brother" supervisory operation, and building a team concept. According to Geber (1986), "... the studies themselves spawned the human relations school of management that is constantly being recycled in new forms today: witness quality circles, participative management, team building . . ." (p. 114). The fundamental concept discovered by Mayo that appears obvious in today's organizations (i.e., industries, universities, colleges, churches, non-profit groups, and governmental agencies) is the social environment (McAfee & Champagne, 1987). From extensive research on incentive pay schemes, William F. Whyte (1955) has shown that pay, the old reliable motivational tool, is not as straight forward as it is supposed to be, particularly for production workers. Employees are motivated much more than by economic self-interest alone.

As "part of the business" in the educational team-building activities, faculty development includes electronic roundtable discussion, merit pay, job analysis, networks, strategic planning, and performance appraisals. The strength of any university lies in the quality and
effectiveness of its faculty and also in the efficiency of its organizational structure (Millett, 1977). The fundamental issue raised by this rationale is, "What motivates people for satisfaction?" In other words, what gets a behavior started? How is it directed, and what can an administrator do to sustain appropriate faculty behavior?

Obviously, continuance of appropriate performance depends on other factors besides motivation such as training, experience, education, and other technological equipment available to the faculty. Still, motivation is a primary component to job performance. The literature contains many content theories--job-content and job-environment--that explains needs which arouse and sustain people's performance. One of the most widely known content (need) theories is Herzberg's Two-Factor theory (Herzberg et al., 1959).

Herzberg's Two-Factor Theory on Job Satisfaction

In the late 1950s and early 1960s, a notable theory of human needs (motivation) or job satisfaction was developed by Frederick Herzberg (1959): the Herzberg's Two-Factor theory. Upon review of the literature, it is noticed that this theory has been called content theory, dual-factor theory, motivator-hygiene theory, or just Herzberg's theory.

Herzberg interviewed 200 engineers and accountants in nine companies in Pittsburgh. The interviewees were asked
to describe several job experiences in which they felt especially satisfied and motivated (good) by their jobs and times when they felt especially dissatisfied and unmotivated (bad). Herzberg divided the responses according to whether they represented good or bad feelings. The subjects were then asked to describe the factor or factors that cause them to feel that way. He was surprised to find that feeling satisfied (good) and feeling dissatisfied (bad) resulted from entirely different sets of factors. That is, "low pay might have made a particular person feel bad, but it was not high pay that had made him or her feel good. Instead, it was some completely different factor" (Hughes & Kapoor, 1985, p. 208). Herzberg (1966) found that many of the satisfiers or motivators were related to job content and job experiences, and that many of the dissatisfiers were related to job-environment conditions. The job content items that were called "motivators" or "satisfiers" included work itself, achievement, recognition, responsibility, growth, and advancement. On the other hand, the job-environment items were called "dissatisfiers" or "hygiene factors" which included company policy and administration, supervision, working conditions, wages, relationship with peers and subordinates, status, and security.

As a result of the analysis, the researchers concluded that job events—the motivator factors—lead to job satisfaction if they are present, but do not cause
dissatisfaction if they are absent. On the other hand, job
events—hygiene factors—lead to job dissatisfaction if they
are absent, but will not add to worker satisfaction if they
are present (Herzberg et al., 1957). This theory states
that feelings about the job have two dimensions such as
satisfaction and dissatisfaction.

What does all this mean to administrators? They should
be insightful to the effect that the extrinsic factors, the
surroundings, fellow workers, company policies and the
administrators, have on dissatisfaction. The administrators
also need to be aware of the effect of the intrinsic factors
(motivators) which are internal to the work itself, such as
challenges, responsibilities, recognition, and advancement.
Herzberg's view is simple. If the administrator wants to
motivate or satisfy employees or other leaders, then giving
them meaningful work that provides for recognition,
achievement, and advancement is necessary. According to
Duncan (1989), "this recommendation clearly established the
idea of 'job enrichment' that has been so much a part of
recent motivation theory and practice" (p. 172). Similarly,
advocates of job enrichment argue that work must be made
more meaningful. "It is not enough to merely enlarge tasks
or rotate them to keep people from becoming excessively
bored. Work should be fundamentally designed to provide
meaning for the one performing the task" (Duncan, 1989, p.
172). Herzberg provided administrators and leaders
something tangible when addressing motivation and satisfaction. According to Adler (1988):

Herzberg (1959) combined elements of both Taylor's (1911) theory and the Human Relations model, providing an in-depth theoretical model for job satisfaction based upon the significance of the intrinsic values (motivators) of work such as achievement, appreciation, recognition, the value of the work itself, personal growth, responsibility, and promotion. Herzberg added that the extrinsic conditions, such as wages, supervision, discipline, interpersonal relations, and working conditions produce conditions of dissatisfaction with the employee when any and/or all of these are absent or deficient in the employment situation (p. 147).

Moreover, Jurgensen (1947, 1961, 1978), Thornton (1983), Blumenfeld, Daves, Zimmatoe, and Jourdan (1982), Blumenfeld and Borek (1985) also used job-content factors in addressing job preferences. Apparently, Herzberg's Two-Factor theory clearly illustrates the categorization of intrinsic and extrinsic values and the importance these have with regard to job satisfaction. Smith, Kendall, and Hulin (1969) define job satisfaction as a result of one's experiences on the job in relation to one's values and expectations of the job. Herzberg (1958) reported that at least 16 other
investigations using a wide variety of populations have been completed since the 1959 study, and all corroborate the original theory. Recent studies of job satisfaction using the two-factor theory also corroborate the original theory with studies of supervisors, educators, college faculty, elementary principals, and in different cultures (Diener, 1985; Gaziel, 1986; Hill, 1987; Jain & Mehtani, 1986; and Silver, 1987).

Research in Job Preference Factors

What makes a job interesting?, what makes a job good or bad?, and what do applicants want? are job insight and identity questions asked by potential faculty members and incumbents (i.e., existing faculty)? The answers to these questions connect values and continue the career relationship between individuals and administrators. It is important to understand career motivation/job satisfaction of employees. Emphasis upon the importance of satisfactory selection of employees and arousing and retaining an employee's attitude in his or her job is scarcely a recent development in organizational behavior (OB).

The quantitative studies on job preference available have been directed towards industry and business organizations but not towards higher education. Although studies differ from each other in number of factors, definitions, and method of presentation, results were in
basic agreement. The most common factors used were as follows: advancement, benefits, company, co-workers, hours, pay, security, supervisor, type of work, and working conditions. Security and opportunity for advancement generally were given top priority and pay was considered average in importance (Chant, 1932; Hardin et al., 1951; Lindbom, 1952, & Jurgensen, 1947, 1948, 1949, 1961, & 1978). On the other hand, pay was given top priority and advancement and security were considered average in importance in the findings of Blumenfeld (1985, 1982, 1981, & 1980) using students who were potential psychologists, potential managers, and blue-collar employees. Thornton (1983) replicated Blumenfeld's (1982) studies showing the same results.

It is important to understand job insight and identity (i.e., job value) of faculty. According to Vecchio and Sussmann (1989):

the magnitude of a person's motivation to perform a task may be assumed to depend in part on individual needs and cognitive systems (orientation) which mediate the effect of social and interpersonal influence on intentions, effort, and action. To the degree that this assumption is valid, motivation in work organizations and other social settings can be understood from an interpersonal interaction point of view (p. 135).
Sussmann and Vecchio (1982) proposed that the effect of specific attempts to influence an individual's motivation depends upon the extent to which influence attempts are congruent with individual orientations. Simply stated, employees' job preferences are guided by their interests and insights, and they tend to make career choices or job decisions on the basis of these interests. That is, employees choose occupations that match their interest patterns. Job preferences, therefore, are the values of individuals which are matched to values of the institution when seeking employment (Jurgensen, 1947, 1961, & 1978).

Research in Job Satisfaction Factors

Job satisfaction—an individual's orientation (attitude) toward his or her job—is undoubtedly one of the most widely studied components in the entire field of organizational behavior (OB) (Staw, 1984). The nature, causes, and correlates of job satisfaction have been mushrooming since the pioneering studies by Hoppock (1935) and Houser (1938). Locke (1983) has reported that more than 3000 studies had examined job satisfaction through 1976 alone!

The primary causes and consequences of job satisfaction can be grouped into the three categories (a) organizational factors, (b) group factors, and (c) personal factors (Locke, 1983). Employees' needs and aspirations can be affected by
five major organizational factors such as pay, opportunities for promotion, the nature of the work itself, policies and procedures of the organization, and working conditions (Bateman & Organ, 1983). Individuals' job satisfaction--within a work group--may be influenced by both their supervisors and administrators and coworkers. Although the supervisor could be classified as an organizational factor because of the description and definition of position as defined by the organization, it is often the supervisor's or administrator's individual characteristics (i.e., understanding, warmth, or integrity) that most influence employee values or attitudes (Locke, 1983). Personal factors include individual's needs, aspirations and instrumental benefits (i.e., the extent to which the benefits enable the worker to achieve other ends).

It can be observed that these factors are related to the content theory of job satisfaction. According to McAfee and Champagne (1987) and Campbell, Dunnette, Lawler, and Weick (1970) this theory attempts to examine motivation or job satisfaction in terms of what specific factors within the individuals or their environment such as wages or recognition motivate the employee.

Illustrative research in job satisfaction has shown the following relevant summarizations:
1. Job satisfaction is positively related between job conditions and personal values (Schaffer, 1953; Gordon, 1955; & Schutz, 1958).

2. The greater the significance of the values involved, the greater influence the values attainment or negation will have on job satisfaction (Schaffer, 1953 & Froelich & Wolins, 1960).


4. Certain factors have been found to lead to satisfaction and other factors lead to dissatisfaction. These two sets of factors differ from each other, and the absence of one set does not necessarily lead to the other conclusion (i.e. the lack of dissatisfiers does not necessarily lead to satisfaction, and vice versa) (Herzberg et al., 1959 & Heron, 1954).

The findings of these studies corroborate the findings in studies today (Locke, 1983; Bridges, 1980; & Fansher & Buxton, 1984, University of Guam Faculty Council, 1990). Herzberg combined scientific management concepts and human relations concepts to describe job satisfaction. Are the intrinsic factors valued to a greater extent than the extrinsic factors? In other words, is recognition more important than pay? According to Adler (1988), using job content and job environmental factors, and Lindahl (1949)
appreciation or recognition (intrinsic factors) is of greater importance than wages (extrinsic factor).
Therefore, job satisfaction is a positive emotional state resulting from the appraisal of one's job or job experience.
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CHAPTER III

RESEARCH METHODS AND PROCEDURES

Introduction

This investigation was designed to determine and analyze the differences between administrators and faculty on job preferential and job satisfaction factors in what faculty members want from a job at the University of Guam. This chapter describes the research methods and procedures that were used in the study under the following headings: (a) the population and sample, (b) a description of research design, (c) a description of research instrument, (d) the data collection procedure, and (e) the statistical analysis of the data.

Population and Sample

In order to ensure continuity and to regulate the study, the investigator established definite procedures to guide the conduct of the survey period and the analysis and interpretation of the data. The data utilized in developing the present research were gathered from both human and documentary sources.

The population surveyed consisted of administrators and faculty. The human sources included 199 subjects (N = 122 undergraduate faculty members and N = 37 graduate faculty
members and N = 40 administrators) who were classified faculty and administrators in the fall of the academic year 1989-90. Subjects used were all full-time faculty members and full-time, part-time administrators as listed in the undergraduate and graduate University of Guam (UOG) Catalogs obtained from the University of Guam President's office. Other human sources included the Office of Academic Affairs and personnel department of the University of Guam and the major professor and members of the investigator's committee. Permission was granted from the University of North Texas Institutional Review Board for the Protection of Human Subjects in Research (IRB) and full review was waived because of the non-offensive nature of the investigation: a questionnaire (see Appendix B).

Documentary sources included books, periodicals, pamphlets, theses, dissertations, and other materials pertinent to the study. Microcards and microfilms related to aspects of the study were also reviewed.

Description of Research Design

The method of research that looks with accuracy at the phenomena of the moment and then describes in detail what the investigator observes is called survey research. These research studies are concerned with status. Another name for this research is called descriptive research (Leedy, 1974). This research method—a branch of social scientific
research--frequently appears in educational settings (Kerlinger, 1986). The survey research procedures and methods have been developed and used by statisticians, psychologists, political scientists, sociologists, and economists (Best, 1977; Kerlinger, 1986; Leedy, 1974; & Tuckman, 1978).

Surveys can be categorized by the following descriptive methods of gaining information: personal interview, mail questionnaire, panel, and telephone. Of the survey research techniques, the most frequently used method is the questionnaire (Thomas, 1985). Good (1966) pointed out that "many national, state, and local organizations have used questionnaire surveys to discover the status of school personnel and current practices in school systems" (p. 214). He further stated that, concerning the frequency of employment, the "questionnaire probably is outranked only by the survey test . . . the two techniques probably involve more than one-half the total studies in education" (p. 214).

A questionnaire was selected by the investigator as the most feasible instrument for obtaining data for this study for the following reasons: (a) the data sought were of a factual nature that could be gathered best by short responses (b) the survey instrument provides the most appropriate method for obtaining a substantial return rate within a limited period of time, and (c) the method of data collection was useful in obtaining information from a large
number of geographically separated respondents (Hayman, 1968 & Kerlinger, 1986). Good (1966) reasoned that the justification of the questionnaire concerning its use and application is that:

... the questionnaire extends the investigator's powers and techniques of observation by reminding the respondents of each item, helping insure response to the same item from all respondents, and tending to standardize and objectify the observations of different enumerators (by singling out particular aspects of the situation and by specifying the units and terminology for describing the observations) (pp. 213-214).

The questionnaire has been utilized in educational research to determine factual information, opinions, attitudes, and interest (Kerlinger, 1986 & Van Dalen, 1979). In order for the investigator to reflect status, the following criteria from Scates and Yeoman (1950) for the construction of the questionnaire have been accepted:

1. It must be short enough so as not to take too much time and so that the respondent will not reject it completely.

2. It must be of sufficient interest and have enough face appeal so that the respondent will be inclined to respond to it and to complete it.

3. The questionnaire should obtain some depth to the response in order to avoid superficial replies.
4. The ideal questionnaire must not be too suggestive or too unstimulating, particularly with reference to choices.

5. The questionnaire should elicit responses that are definite but not mechanically forced.

6. Questions must be asked in such a way that the responses will not be embarrassing to the individual.

7. Questions must be asked in such a manner as to allay suspicion on the part of the respondent concerning hidden purposes in the questionnaire.

8. The questionnaire must not be too narrow, restrictive, or limited in its scope or philosophy.

9. The responses to the questionnaire must be valid, and the entire body of data taken as a whole must answer the basic question for which the questionnaire was designed (pp. 2-4).

The ten job preferential determinants have been validated and used by the following researchers: Blumenfeld (1982), Hardin, Reif, and Heneman (1951), Jurgensen (1947, 1978), and Thornton (1983). These ten job preferential determinants were used for the study on job insight and identity at the University of Guam. The ten job satisfaction factors from the original research of Lindahl (1949) and the replication study by Adler (1988) were utilized. Job satisfaction factors have been used and validated by the two studies mentioned above.
researcher used the validated factors in the data collection questionnaire: the paired-comparison technique (Guilford, 1936; Lawshe, 1949; McCormick, 1952; & Thurstone, 1927).

In addition, certain procedural steps were followed in the development of the questionnaire. First, an extensive review of the literature of the paired comparison method was conducted. Secondly, the rough draft was reviewed by the major professor. Thirdly, upon request of major professor the survey questionnaire was reviewed by University of North Texas Educational Research Foundation professors and Texas Woman's University professors, and these professors have agreed to the appropriateness of the research design and methodology of this study. Lastly, copies were provided to all committee members for final revision for appropriateness, and the committee members agreed upon the research design and methodology. Approved questionnaires were printed by a commercial printing firm and an example can be found in Appendix C.

For ensured continuity and regulation of study, the investigator developed a system for organizing and/or tabulating data. Data were collected by introductory letters, follow-up letters, and follow-up telephone calls.

A cover letter was written on stationery from the University of North Texas' Department of Higher and Adult Education and approved by the major professor of the doctoral committee, the minor professor on the committee,
and the investigator. The cover letter assured each participant that all questionnaire responses would be held in the strictest of confidence.

Description of Research Instrument

Procedures for the development of a questionnaire were reviewed in several researchers' materials, such as Adler, 1988; Good and Scates, 1954; Guilford, 1936; Guillicksen, 1946; Hartwig and Myers, 1976; and Huettig, 1982; Kerlinger, 1967, 1986; Lawshe, Kephart, and McCormick, 1949; Lindahl, 1949; Lowry, 1972; McCormick and Bachus, 1952; McCormick and Roberts, 1952; Myers, 1989; Thurstone, 1927; and Weiller, 1980. It was noted that even though instruments are usually devised with respect to validity, reliability, and objectivity, the main concern in constructing the questionnaire is validity (i.e., content validity). This validity is determined by documentary analysis, expert panel, or logical examination of course content and questionnaire capacity (Best, 1977; Hinson, 1987; McCallon, 1988; & Schumacker, 1988). Validity of a test is defined as the test accurately measuring what it claims to measure. Content validity is the representativeness or sampling adequacy of the content (Kerlinger, 1986, p. 417). Koenker (1961) stated that one of the methods to find a test's validity is to "construct a test and say it is valid because in the author's opinion it covers the field to be tested."
This method is generally acceptable for teacher made tests, and is frequently known as 'curricular' or 'content' validity" (p. 65).

The validity of a questionnaire and its components, according to Good and Scates (1954), is judged by the following questions:

1. Does the question pertain to the subject?
2. Is the question perfectly clear and unambiguous?
3. Does the question relate to something stable which is typical of the individual or the situation?
4. Does the question have extractive power?
5. Will the question be answered by a large enough portion of the respondents to have validity?
6. Do the responses show a reasonable range of variation?
7. Is the information consistent, in agreement with what is known, and in agreement with expectancy?
8. Is the item sufficiently inclusive (p. 154)?

The researcher ensured that the instrument used in this study followed these guidelines.

The questionnaire used for this study was devised with two sections, demographic data and paired-comparison factors. The demographic data section included the subject's age, gender, position title, ethnic background, years in this organization, and faculty position level (i.e., graduate or undergraduate) (see Appendix C).
The researcher selected the paired-comparison technique for determining job preferential and job satisfaction reasons for job insight and identity at University of Guam. The method of paired comparison was used to obtain scale values of faculty and administrators on job preferential and job satisfaction factors at the University of Guam. Lowry (1972) stated that:

this method is valuable for it not only establishes the hierarchy of the item's positions (or ranks), but also establishes the valence of the difference between ranks. This psychometric method allows the rater to make a comparative judgment between two items at a time as to which of the two is more important (p. 32).

This technique is a well-established psychometric measurement technique (Kerlinger, 1967, 1986; Guilford, 1931, 1936; & Lowry, 1972).

The technique's credibility and value can be illustrated in a brief description of its history and development. Guilford (1936), in the book *Psychometric Methods*, reported that the method of paired comparisons was derived from G. T. Fechner's "method of choice" which was reported in a German article in 1871. Because Fechner arranged the stimuli haphazardly, certain stimuli were chosen due to position rather than intrinsic judgment. J. Cohen in 1894 improved the technique in attempting a systematic presentation of the stimuli. The technique was
later improved by A. Kowalewski by avoiding the error of repeating stimuli in immediate succession (Lowry, 1972).

Thurstone (1927) presented this technique to the American public in his published article in the *Journal of Abnormal and Social Psychology*. He developed this method to be used with directly measurable stimuli but it is frequently used when the object is not directly measurable (Nunnally, 1970). Thurstone (1928) showed this applicability in his study to determine the nationality of preferences of 250 subjects. He stated, "It is conceivable that the method may be of some use in the objective measurement of social attitudes that are usually reported with the prejudice of bias of individual authors and investigators" (p. 418).

Guilford (1928) examined paired comparisons as a psychometric method. He suggested that Thurstone's proposed technique for dealing with the data collected was time consuming, and suggested the following alternative:

My first short cut eliminates most of this labor. It requires a tabulation of the total number of times each stimulus is chosen, no matter in what combination it occurred, and the calculation from this of the number of times it was chosen . . . . It was found that if we take simply the total number of times each stimulus is chosen in preference to all the rest, we will have
values which bear a relationship to those obtained by Thurstone (p. 497).

In 1931 Guilford obtained high reliability coefficients within universities (from .967 to .999) in his study of racial preferences for the primary purpose of testing the method of paired comparisons when it was applied to the measurement of racial attitudes. His scale values of the races was determined by 1000 university students compared within each university and among universities. Among the schools, the intercorrelation coefficients ranged from .843 to .991. Guilford in 1936 expanded on the credibility and value of the paired comparison technique in the following:

The range of applicability of the method of paired comparisons is so great that not all the specific uses can be referred to here. In general, it can be applied whenever stimuli can be presented in pairs, either simultaneously or in succession. Its chief use up to the present time has been in the determination of affective values and of aesthetic values; colors, designs, rectangles, musical intervals, nationality preferences, and the like have been the favorite stimuli. Opinions on such questions as prohibition, war, religion, and the like can be treated and evaluated by this method, although the handling of such material in paired comparisons becomes at times a bit awkward. The application to the evaluation of
individuals on some trait of personality or character, or on their value to certain industry, as Uhrbrock and Richardson have already done, would seem to have great possibilities. It might replace the less accurate and less valid method of rating scales, where more exacting practical or experimental work needs to be done (p. 240).

Guilford (1936), Hartwig and Myers (1976), and Ross (1934) presented the following criteria for the presentation of information:

1. Each stimulus should be paired with every other pair (i.e., Stimulus is synonymous to item, word, or phrase.)

2. The total number of pairs will equal--n(n-1)/2.

3. No response should be repeated twice in succession.

4. No rhythmical pattern should be evidenced (i.e., Care should be taken to prevent an item from appearing in two successive pairs.)

5. Each stimulus should appear an equal number of times on the right side and on the left side.

6. Each stimulus should be spaced as far apart as will be allowed from each identical stimulus.

The paired-comparison technique used in research to make the subjects discern between relatively similar, perhaps interactive, items was also supported by Slater
(1961). He suggested that the instrument reveals evidence of internal consistency.

Krech and Crutchfield (1948) note: "The method of paired comparisons can yield for the whole group of subjects not only the ranking of the various objects but something in addition about the distance between any two objects on the scale" (p. 225).

Ferguson (1981) reported:
To obtain a ranking of objects on an attribute, the objects may be presented two at a time in all possible pairs and a judge required to make a choice on the presentation of each pair. Thus a choice is made between every object and every other object. This procedure is known as the method of paired comparisons and has been widely used in psychological work. The method is usually assumed to yield a more reliable ordering than that obtained by requiring a judge to order a whole group of objects directly. The number of possible pairs is the number of combinations of N things taken two at a time, or \( \frac{N(N-1)}{2} \). As N increases, the number of comparisons increases very rapidly; consequently for large N the method is frequently impractical (p. 392).

The paired-comparison technique is useful as it is able to derive a large quantity of information from a small quantity of material and was considered by Kerlinger (1967)
to be one of the "most satisfying of psychometric methods" (p. 497). It is similar to the rank-order method in generating rankings of items but is considered to be a more thorough approach (Nunnally, 1970). Also, the instrument expresses the differences existing between two alternatives because no equal judgment is allowed (Kerlinger, 1967).

The nature of this study is such that the paired-comparison instrument meets the criteria established and is an established and widely used technique for psychometric measurement as suggested by the review of the literature. Therefore, the paired-comparison technique was chosen as the appropriate method for the collection of data for this study.

The development of a paired-comparison instrument requires the selection of a series of items related to a particular criterion which can be presented to a subject in sets of pairs (Hartwig & Myers, 1976 & Weiller, 1980). These items may be single words, phrases, sentences, ethnic groups, occupations, or paragraphs of which are paired to every other item and ordered for presentation to the subject (Van Dalen, 1979). The subjects are then required to choose one item of each pair (i.e., forced choice) on the basis of the criterion established (Richardson, 1949), indicating which they prefer.

This study used the guidelines for presentation of pairs as established by Ross (1934) relating to precautions
in ordering the pairs to control conditions that might bias the results. The principles used were as follows: (a) each item should appear first in half of the pairs of which it is a member, (b) pairs that have an item in common should be maximally separated, and (c) a pattern of items which might influence a person's response should be avoided.

According to Huettig (1982), with such concerns taken into account, the paired comparison technique has stood the test of time as a statistical/research tool within psychological and social research. It has been indicated that it is viable for research particularly dealing with attitudes and other difficult-to-define variables (p. 34). Through documentary analysis, research using this instrument, and expert agreement on the paired-comparison technique, validity has been established.

Data Collection Procedures

A proxy from the Office of Academic Affairs or personnel department of the University of Guam was selected for instruction and distribution of the questionnaire. An explanatory letter from the researcher and a stamped, self-addressed envelope accompanied each questionnaire. All questionnaires were coded to provide the researcher with a means of identifying who had not responded.

The first mailing of questionnaires was made on February 14, 1990. At the end of 2 weeks, February 28,
1990, follow-up post cards were sent to all nonrespondents (see Appendix D). Within 4 weeks, March 14, 1990, of the first mailing, questionnaires were sent to the nonrespondents stressing the importance of the questionnaire being returned. Included with the letter was another stamped, self-addressed envelope. Within 2 weeks, March 28, 1990, of the mailing of the second instrument, follow-up post cards were sent to all nonrespondents. After 4 weeks, April 11, 1990, of the distribution of the second instrument, questionnaires including a stamped, self-addressed envelope were sent to all nonrespondents. Within 2 weeks, April 25, 1990, of the distribution of the third set of questionnaires, follow-up telephone calls were made to the nonrespondents. A modified follow-up collection procedure was done by retrieval of questionnaire by proxy, Mr. Alfred G. Blaz by May 2, 1990 (see Appendix D).

Statistical Analysis of the Data

Raw data on each item of the demographic section of the questionnaire were tallied and converted to percentages. These data were organized for presentation in appropriate tabular forms for Chapter IV. In addition, the frequencies of choice for each statement were tallied and hand scored according to the reasons as to what faculty members want from their job for job insight and identity.
Data were coded and submitted to a computer program for analysis of paired-comparison data. Data were analyzed by use of the following methods. To test subjective reactions of raters in the form of an interval scale, the law of comparative judgment was used. The law of comparative judgment consists of converting percentages of responses "greater than" into corresponding deviates on the normal curve (Guilford, 1954).

To test the significant differences between groups (faculty members and administrators and male and female faculty members) on job preferential factors and on job satisfaction determinants, the multiple-sample chi-square test was used (Wynne, 1982). The level of .05 of significance was selected to reject the null hypotheses. The hierarchy and valence of factors' position was analyzed by use of percentage of frequency.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

In Chapter 4 the investigator will present the results of the statistical analysis of the data collected. The findings of the study were based on data collected through a four-page, paired-comparison questionnaire given to faculty members and administrators at the University of Guam. The purposes of the study were (a) to compare the factors that faculty members deem significant with the factors that administrators consider significant in terms of job preference and job satisfaction and (b) to determine the hierarchical and valence response pattern of raters of each factor's rank and interval position.

The data presented and analyzed in this chapter were divided in four subheadings: (a) description of the population characteristics, (b) description of the rank and interval position of each factor, (c) description of items and statistical testing of the hypotheses, and (d) additional findings, post hoc analysis. The responses were analyzed using percentages, converting percentages responses into corresponding deviate on the normal curve (i.e., law of comparative judgment) (Guilford, 1954) and the multiple-
sample chi-square test (Wynn, 1982) to test for differences between groups.

Description of the Population Characteristics

Using an 1989-90 official catalog or personnel list from the University of Guam, 159 full-time faculty members (N = 122 undergraduate faculty members and N = 37 graduate faculty members) were used for the investigation. Forty full-time and part-time administrators (N = 40) were used for study. Table 1 illustrates the participants by level of groups.

Table 1

| Characteristic of Respondents Surveyed and the Percentages of Returned Questionnaires |
|---------------------------------|-----------------|-----------------|-------------------|
|                                 | Faculty Members | Administrators   | Total             |
| Return Rate                    | #       | %    | #       | %    | #     | %    |
| Number Surveyed                | 159     | ---  | 40     | ---  | 199    | ---  |
| Number Returned                | 91      | 57.2 | 32     | 80.0 | 123    | 61.8 |

One hundred ninety-nine paired-comparison questionnaires were distributed. Those qualified for the investigation were 159 faculty members and 40 administrators. All questionnaires were usable for analysis, 159 by the faculty members and 40 by the
administrators. The faculty members responded at a rate of 57.2%; and the administrators responded at a rate of 80.0%. The combined overall response rate was 61.8%. The data included hand scoring of each subject's responses to the paired-comparison questionnaire.

The number of participants with regard to the age of the faculty members and administrators is illustrated in Table 2.

Table 2
Distribution of Participants by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Faculty Members</th>
<th>Administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 91</td>
<td>n = 32</td>
</tr>
<tr>
<td></td>
<td>#   %</td>
<td>#   %</td>
</tr>
<tr>
<td>29 and Under</td>
<td>0   0.0</td>
<td>2   6.3</td>
</tr>
<tr>
<td>30 - 34</td>
<td>4   4.3</td>
<td>1   3.1</td>
</tr>
<tr>
<td>35 - 39</td>
<td>22  24.2</td>
<td>3   9.4</td>
</tr>
<tr>
<td>40 - 44</td>
<td>17  18.7</td>
<td>5   15.6</td>
</tr>
<tr>
<td>45 - 49</td>
<td>19  20.9</td>
<td>7   21.9</td>
</tr>
<tr>
<td>50 - 54</td>
<td>14  15.4</td>
<td>10  31.3</td>
</tr>
<tr>
<td>55 and over</td>
<td>16  17.6</td>
<td>4   12.5</td>
</tr>
</tbody>
</table>

Over 53.8% of the faculty members who participated in the study were the age of 45 years and over, with 47.2% of the faculty members in the age groups below 45 years. Over 65.6% of the administrators who participated in the study were the age of 45 years and over, with 34.4% of the administrators in the age groups below 45 years.
In Table 3 the number of faculty members is distributed by gender and teaching status.

Table 3

Faculty Members by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Faculty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Graduate</td>
<td>Undergraduate</td>
</tr>
<tr>
<td>Males</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td>females</td>
<td>8</td>
<td>21</td>
</tr>
</tbody>
</table>

Note: Thirteen respondents (n = 13, 10 males and 3 females) categorized themselves as both graduate and undergraduate faculty members for 14.3% of the 91 total respondents.

Table 3 shows that 64.8% of the faculty members were males and 35.2% were females. In comparing the levels of status, graduate level showed 55.6% to be males, whereas 44.4% were females. Males make up 65% of the undergraduate level, whereas 35% were females.

Distribution of administrators by gender is shown in Table 4.
Table 4

Distribution of Administrators by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 32 )</td>
</tr>
<tr>
<td></td>
<td>#</td>
</tr>
<tr>
<td>Males</td>
<td>20</td>
</tr>
<tr>
<td>Females</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 4 shows that 62.5% of the administrators were males, whereas 37.5% were females. Males make up over half of the total number of administrator respondents.

Table 5 illustrates the ethnic background distribution. An overwhelming majority (60.4%) of the faculty members were of white ethnic background. The combination of the other categories of ethnic background equals 39.6%. In the administrator's category, 59.4% were of white ethnic background. The combination of the other categories of ethnic background of administrators equals 40.6%. Pacific Islander is the second largest group with a total of 26.8%.
Table 5

Distribution of Ethnic Background

<table>
<thead>
<tr>
<th>Ethnic Status</th>
<th>Faculty Members</th>
<th>Administrators</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 91</td>
<td>n = 32</td>
<td>n = 123</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>White</td>
<td>55 60.4</td>
<td>19 59.4</td>
<td>74 60.2</td>
</tr>
<tr>
<td>Black</td>
<td>0 0.0</td>
<td>0 0.0</td>
<td>0 0.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1 1.1</td>
<td>0 0.0</td>
<td>1 0.8</td>
</tr>
<tr>
<td>Asian</td>
<td>8 8.8</td>
<td>1 3.1</td>
<td>9 7.3</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>21 23.1</td>
<td>12 37.5</td>
<td>33 26.8</td>
</tr>
<tr>
<td>Others</td>
<td>6 6.6</td>
<td>0 0.0</td>
<td>6 4.9</td>
</tr>
</tbody>
</table>

The distribution of faculty members by position title is presented in Table 6. Seventeen (18.7%) of the faculty members have the title of Full Professor. Also, a large proportion of the professors (38.5%) have the title of Associate Professor, whereas 22.0% were assistant professors and 17% were instructors.
Table 6

Distribution of Faculty Members by Position Title

<table>
<thead>
<tr>
<th>Faculty Members (Position Title)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 91</td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Instructor</td>
<td>17</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>20</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>35</td>
</tr>
<tr>
<td>Full Professor</td>
<td>17</td>
</tr>
</tbody>
</table>

Note: Two of the respondents (2.1%) indicated a title other than those listed.

Table 7 provides information regarding the distribution of administrators by position title. This table identifies that 28.1% of administrators were from the Offices of Academic and Administrative Affairs, whereas 40.6% were Department Administrators and 25% were from the Office of the President. Since the time that the questionnaires were developed, the University of Guam has undergone a reorganization in its administrative structure; for example, department administrators (chairpersons) are no longer within the listing of administrators and new offices have been developed.
Table 7

Distribution of Administrators by Position Title

<table>
<thead>
<tr>
<th>Administrators</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Position Title)</td>
<td>n = 32</td>
</tr>
<tr>
<td></td>
<td>#</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Office of the President</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>25.0</td>
</tr>
<tr>
<td>Office of Administrative Affairs</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>21.8</td>
</tr>
<tr>
<td>Office of Academic Affairs</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>6.3</td>
</tr>
<tr>
<td>Department Administrators</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>40.6</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>6.3</td>
</tr>
</tbody>
</table>

Table 8

Distribution of Faculty Members by Status

<table>
<thead>
<tr>
<th>Status of Faculty Members</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 91</td>
</tr>
<tr>
<td></td>
<td>#</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>65.9</td>
</tr>
<tr>
<td>Graduate</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>19.8</td>
</tr>
<tr>
<td>Both</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>14.3</td>
</tr>
</tbody>
</table>

Table 8 presents the distribution of participants with regard to faculty status. Over 65% of the faculty members
who participated in the study were classified undergraduate, whereas over 19.8% were classified graduate. Thirteen (14.3%) respondents taught both undergraduate and graduate level.

The numbers of participants with regard to the years in organization of the faculty members and administrators are illustrated in Table 9.

Table 9

<table>
<thead>
<tr>
<th>Distribution of Participants by Years in Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>2 and Under</td>
</tr>
<tr>
<td>3 - 4</td>
</tr>
<tr>
<td>5 - 6</td>
</tr>
<tr>
<td>7 - 8</td>
</tr>
<tr>
<td>9 Years or Over</td>
</tr>
</tbody>
</table>

Over 49.5% of the faculty members who participated in the study had been employed with the University of Guam of 7 or more years with the organization, with 50.5% of the faculty members who have worked at the University of Guam are under 6 years. Over 43.7% of the administrators who participated in the study were employed with the University
of Guam for 7 or more years, with 56.3% of the administrators working for the University of Guam under 6 years.

Description of the Rank and Interval Position of Factors

Survey analysis was done to establish ordinal and interval counts of factors influencing faculty members sentiments or values for job preference and job satisfaction at the University of Guam. Highly dependable job preferential and job satisfaction factors identified by the faculty members and administrators are shown in the following tables. Tables 10 through 17 provide information on faculty members' and administrators' and male and female faculty members' hierarchical and interval job preferential and job satisfaction response patterns.

Table 10 shows the faculty members' and administrators' job preferential response pattern. From Table 10, it can be observed that Type of Work (16.7%) is the preferential motive by the faculty members with Pay (11.6%) above the rest of the factors. Hours (6.5%) and Supervisor (7.0%) make a negligible showing as preferential motives.

Pay (14.6%) was the preferential motive by the administrators with Advancement (13.5%) as the second most preferred. Hours (5.6%) and Company (6.0%) make a negligible showing as preferential motives.
Table 10

Job Preferential Factors by Faculty and Administrators

<table>
<thead>
<tr>
<th>Factors</th>
<th>Faculty</th>
<th>Administrators</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 4095</td>
<td>n = 1440</td>
<td>n = 5535</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>Advancement</td>
<td>456</td>
<td>11.1</td>
<td>194</td>
</tr>
<tr>
<td>Benefits</td>
<td>417</td>
<td>10.2</td>
<td>159</td>
</tr>
<tr>
<td>Company</td>
<td>295</td>
<td>7.2</td>
<td>87</td>
</tr>
<tr>
<td>Co-workers</td>
<td>422</td>
<td>10.3</td>
<td>123</td>
</tr>
<tr>
<td>Hours</td>
<td>268</td>
<td>6.5</td>
<td>80</td>
</tr>
<tr>
<td>Pay</td>
<td>476</td>
<td>11.6</td>
<td>210</td>
</tr>
<tr>
<td>Security</td>
<td>397</td>
<td>9.7</td>
<td>168</td>
</tr>
<tr>
<td>Supervisor</td>
<td>286</td>
<td>7.0</td>
<td>90</td>
</tr>
<tr>
<td>Type of Work</td>
<td>683</td>
<td>16.7</td>
<td>191</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>395</td>
<td>9.6</td>
<td>138</td>
</tr>
</tbody>
</table>

Table 11 shows the faculty members' and administrators' job preferential rank response patterns.
Table 11

<table>
<thead>
<tr>
<th>Factors</th>
<th>Faculty Rank</th>
<th>Faculty #</th>
<th>Administrators Rank</th>
<th>Administrators #</th>
<th>Total Rank</th>
<th>Total #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement</td>
<td>3</td>
<td>456</td>
<td>2</td>
<td>194</td>
<td>3</td>
<td>650</td>
</tr>
<tr>
<td>Benefits</td>
<td>5</td>
<td>417</td>
<td>5</td>
<td>159</td>
<td>4</td>
<td>576</td>
</tr>
<tr>
<td>Company</td>
<td>8</td>
<td>295</td>
<td>9</td>
<td>87</td>
<td>8</td>
<td>382</td>
</tr>
<tr>
<td>Co-workers</td>
<td>4</td>
<td>422</td>
<td>7</td>
<td>123</td>
<td>6</td>
<td>545</td>
</tr>
<tr>
<td>Hours</td>
<td>10</td>
<td>268</td>
<td>10</td>
<td>80</td>
<td>10</td>
<td>348</td>
</tr>
<tr>
<td>Pay</td>
<td>2</td>
<td>476</td>
<td>1</td>
<td>210</td>
<td>2</td>
<td>686</td>
</tr>
<tr>
<td>Security</td>
<td>6</td>
<td>397</td>
<td>4</td>
<td>168</td>
<td>5</td>
<td>565</td>
</tr>
<tr>
<td>Supervisor</td>
<td>9</td>
<td>286</td>
<td>8</td>
<td>90</td>
<td>9</td>
<td>376</td>
</tr>
<tr>
<td>Type of Work</td>
<td>1</td>
<td>683</td>
<td>3</td>
<td>198</td>
<td>1</td>
<td>874</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>7</td>
<td>395</td>
<td>6</td>
<td>138</td>
<td>7</td>
<td>533</td>
</tr>
</tbody>
</table>

In Table 11, the response patterns regarding the hierarchical and valence of factors' position by faculty members and administrators of what motivates them to select and gain employment at the University of Guam is illustrated. For the faculty members Type of Work (1), Pay (2), and Advancement (3) ranked as the dominant factors of personal influence in the decision of selection of
employment at the University of Guam. The importance of Hours (10) was deemed least important.

For the administrators Pay (1), Advancement (2) and Type of Work (3) ranked as the dominant preferential factors at the University of Guam. The significance of Hours (10) was considered of least importance. The overall most preferred preferential factors were Type of Work (1), Pay (2) and Advancement (3). Least important overall were Company (9) and Hours (10). Respondents, as a group chose Type of work (1), Pay (2), and (3) Advancement.

Table 12 shows the faculty members’ and administrators’ job satisfaction response patterns. From Table 12, it can be observed that Interesting Work (16.0%) is the satisfaction motive by the faculty members with Good Wages (13.3%) above the other factors. Tactful Disciplining (4.5%) and Understanding (6.5%) made a negligible showing as sentiment motives. Promotion (14.6%) and Good Wages (15.6%) were the two most preferred satisfaction motives by administrators with Tactful Disciplining (3.7%) and Understanding (5.1%) as the least satisfaction motives.
Table 12

<table>
<thead>
<tr>
<th>Factors</th>
<th>Faculty</th>
<th>Administrators</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 4095</td>
<td>n = 1440</td>
<td>n = 5535</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>Good Wages</td>
<td>544</td>
<td>13.3</td>
<td>224</td>
</tr>
<tr>
<td>Job Security</td>
<td>386</td>
<td>9.4</td>
<td>185</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>657</td>
<td>16.0</td>
<td>184</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>185</td>
<td>4.5</td>
<td>53</td>
</tr>
<tr>
<td>In On Things</td>
<td>323</td>
<td>7.9</td>
<td>125</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>416</td>
<td>10.2</td>
<td>141</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>345</td>
<td>8.4</td>
<td>96</td>
</tr>
<tr>
<td>Appreciation</td>
<td>469</td>
<td>11.5</td>
<td>148</td>
</tr>
<tr>
<td>Promotion</td>
<td>503</td>
<td>12.3</td>
<td>210</td>
</tr>
<tr>
<td>Understanding</td>
<td>267</td>
<td>6.5</td>
<td>74</td>
</tr>
</tbody>
</table>

Table 13 shows the faculty members' and administrators' job satisfaction rank response patterns. It can be observed that Interesting Work, ranked first, is the satisfaction motive chosen by the faculty members with Good Wages ranked second above the other factors.
### Table 13

**Rank Order of Job Satisfaction Factors by Faculty and Administrators**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Faculty</th>
<th>Administrators</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 4095</td>
<td>n = 1440</td>
<td>n = 5535</td>
</tr>
<tr>
<td></td>
<td>rank</td>
<td>rank</td>
<td>rank</td>
</tr>
<tr>
<td>Good Wages</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Job Security</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>In On Things</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Appreciation</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Promotion</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Understanding</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Understanding ranked ninth and Tactful Disciplining ranked tenth make a negligible showing as sentiment motives.

Good Wages (1) was the satisfaction motive picked by the administrators with Promotion (2) ranked higher than the other factors. Tactful Disciplining (10) and Understanding (9) make a negligible showing as satisfaction motives.
Overall ranking shows that Interesting Work (1) and Good Wages (2) are dominant satisfaction factors.

Table 14 illustrates the job preferential response patterns by male and female faculty members.

Table 14

<table>
<thead>
<tr>
<th>Factors</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 2655</td>
<td>n = 1440</td>
<td>n = 4095</td>
</tr>
<tr>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Advancement</td>
<td>306</td>
<td>150</td>
<td>456</td>
</tr>
<tr>
<td>Benefits</td>
<td>269</td>
<td>148</td>
<td>417</td>
</tr>
<tr>
<td>Company</td>
<td>201</td>
<td>95</td>
<td>296</td>
</tr>
<tr>
<td>Co-workers</td>
<td>265</td>
<td>157</td>
<td>422</td>
</tr>
<tr>
<td>Hours</td>
<td>143</td>
<td>125</td>
<td>268</td>
</tr>
<tr>
<td>Pay</td>
<td>310</td>
<td>166</td>
<td>476</td>
</tr>
<tr>
<td>Security</td>
<td>268</td>
<td>129</td>
<td>397</td>
</tr>
<tr>
<td>Supervisor</td>
<td>182</td>
<td>103</td>
<td>285</td>
</tr>
<tr>
<td>Type of Work</td>
<td>442</td>
<td>241</td>
<td>683</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>269</td>
<td>126</td>
<td>395</td>
</tr>
</tbody>
</table>

In Table 14, the question regarding the hierarchical and valence of factors' positionings by male and female faculty members of what motivates them to select and gain employment at the University of Guam is illustrated. For
the male faculty members, Type of Work (16.6%), Pay (11.7%), and Advancement (11.5%) ranked one, two, and three as the dominant factors of personal influence in the decision of selection of employment at the University of Guam. The factors Hours (5.4%) and Supervisor (6.9%) were deemed least important.

For the female faculty members, Type of Work (16.7%), Pay (11.5%), and Co-workers (10.9%) ranked one, two, and three as the dominant preferential factors at the University of Guam. The significance of Company (6.6%) and Supervisor (7.2) were considered of least importance.

Table 15 shows the job preferential rank response patterns for male and female faculty members. This table illustrates hierarchical and valence of factors' positioning by male and female faculty members of what motivates them to select and gain employment at the University of Guam. For the male faculty members, Type of Work, Pay, and Advancement ranked one, two, and three as the dominant factors of personal influence of selecting employment at the University of Guam. The importance of Hours (10) and Supervisor (9) were deemed least important.
Table 15

Rank Order of Job Preferential Factors by Male and Female Faculty Members

<table>
<thead>
<tr>
<th>Factors</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 2655</td>
<td>n = 1440</td>
<td>n = 4095</td>
</tr>
<tr>
<td>Advancement</td>
<td>3 306</td>
<td>4 150</td>
<td>3 456</td>
</tr>
<tr>
<td>Benefits</td>
<td>5 269</td>
<td>5 148</td>
<td>5 417</td>
</tr>
<tr>
<td>Company</td>
<td>8 201</td>
<td>10 95</td>
<td>8 296</td>
</tr>
<tr>
<td>Co-workers</td>
<td>7 265</td>
<td>3 157</td>
<td>4 422</td>
</tr>
<tr>
<td>Hours</td>
<td>10 143</td>
<td>8 125</td>
<td>10 268</td>
</tr>
<tr>
<td>Pay</td>
<td>2 310</td>
<td>2 166</td>
<td>2 476</td>
</tr>
<tr>
<td>Security</td>
<td>6 268</td>
<td>6 129</td>
<td>6 397</td>
</tr>
<tr>
<td>Supervisor</td>
<td>9 182</td>
<td>9 103</td>
<td>9 285</td>
</tr>
<tr>
<td>Type of Work</td>
<td>1 442</td>
<td>1 241</td>
<td>1 683</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>4 269</td>
<td>7 126</td>
<td>7 395</td>
</tr>
</tbody>
</table>

For the female faculty members, Type of Work, Pay, and Co-workers ranked one, two, and three as the dominant preferential factors at the University of Guam. The significance of Company (10) and Supervisor were considered least important.

Table 16 shows the male and female faculty members job satisfaction response patterns.
Table 16
Job Satisfaction Factors by Male and Female Faculty Members

<table>
<thead>
<tr>
<th>Factors</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 2655)</td>
<td>(n = 1450)</td>
<td>(n = 4105)</td>
</tr>
<tr>
<td>Good Wages</td>
<td>347</td>
<td>198</td>
<td>545</td>
</tr>
<tr>
<td></td>
<td>13.1</td>
<td>13.7</td>
<td>13.3</td>
</tr>
<tr>
<td>Job Security</td>
<td>262</td>
<td>125</td>
<td>387</td>
</tr>
<tr>
<td></td>
<td>9.9</td>
<td>8.6</td>
<td>9.4</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>424</td>
<td>234</td>
<td>658</td>
</tr>
<tr>
<td></td>
<td>16.0</td>
<td>16.1</td>
<td>16.0</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>110</td>
<td>76</td>
<td>186</td>
</tr>
<tr>
<td></td>
<td>4.1</td>
<td>5.2</td>
<td>4.5</td>
</tr>
<tr>
<td>In On Things</td>
<td>220</td>
<td>104</td>
<td>324</td>
</tr>
<tr>
<td></td>
<td>8.3</td>
<td>7.2</td>
<td>7.9</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>271</td>
<td>146</td>
<td>417</td>
</tr>
<tr>
<td></td>
<td>10.2</td>
<td>10.1</td>
<td>10.2</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>204</td>
<td>142</td>
<td>346</td>
</tr>
<tr>
<td></td>
<td>7.7</td>
<td>9.8</td>
<td>8.4</td>
</tr>
<tr>
<td>Appreciation</td>
<td>308</td>
<td>162</td>
<td>470</td>
</tr>
<tr>
<td></td>
<td>11.6</td>
<td>11.2</td>
<td>11.4</td>
</tr>
<tr>
<td>Promotion</td>
<td>332</td>
<td>172</td>
<td>504</td>
</tr>
<tr>
<td></td>
<td>12.5</td>
<td>11.9</td>
<td>12.3</td>
</tr>
<tr>
<td>Understanding</td>
<td>177</td>
<td>91</td>
<td>268</td>
</tr>
<tr>
<td></td>
<td>6.7</td>
<td>6.3</td>
<td>6.5</td>
</tr>
</tbody>
</table>

From Table 16, it can be observed that Interesting Work (16.0%) is the satisfaction motive of the male faculty members with Good Wages (13.1%) and Promotion (12.5%) above the other factors. Tactful Disciplining (4.1%) and Understanding (6.7%) make a negligible showing as sentiment motives.

Interesting Work (16.1%) was the satisfaction motive of the female faculty members with Good Wages (13.7%) and
Promotion (11.9%) ranked higher than the other factors. Tactful Disciplining (5.2%) and Understanding (6.3%) make a negligible showing as satisfaction motives.

Table 17 shows the male and female faculty members' job satisfaction rank response patterns. From Table 17, it can be observed that Interesting Work (1) is the satisfaction motive of the male faculty members with Good Wages (2) and Promotion (3) above the other factors. Tactful Disciplining (10) and Understanding (9) make a negligible showing as sentiment motives.

Interesting Work (1), Good Wages (2), and Promotion (3) were the satisfaction motives chosen by the female faculty members. Tactful Disciplining (10) and Understanding (9) make a negligible showing as satisfaction motives. The group totals reflect the rank patterns of the male and female job satisfaction choices.

The data collected for Tables 10 through 17 have been treated by calculating frequency of responses and percentages. These tables showed rank distance for each group in a method called ordinal estimation. As the name implies, the participant is required to rank stimuli from "most" to "least" with respect to some attribute of judgment or sentiment.
Table 17

Rank Order of Job Satisfaction Factors by Male and Female Faculty Members

<table>
<thead>
<tr>
<th>Factors</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 2655 )</td>
<td>( n = 1450 )</td>
<td>( n = 4105 )</td>
</tr>
<tr>
<td>Good Wages</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Job Security</td>
<td>6</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>In On Things</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>8</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Appreciation</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Promotion</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Understanding</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

This method, however, does not allow for comparative judgment of "greater than." To do such comparisons, the law of comparative judgment is used. To test subjective reactions or sentiment of raters in the form of interval scale, the law of comparative judgment consists of converting percentages of responses "greater than" into corresponding deviates on the normal curve (Guilford, 1954).
Tables 18 through 25 present the faculty members' and administrators' and male and female job preferential and job satisfaction interval response patterns. These tables were formed to show the conversion of each proportion into normal deviate of persons in a group who indicate that certain stimuli are greater than others.

In Table 18, the Final scale row indicates the interval scale of faculty members' choices for preferential factors involved. Type of Work is most preferred followed by Pay and Advancement, and Hours is least preferred; the latter being arbitrarily designated as zero on the interval scale. The interval data reflect the ordinal positioning by faculty on job preference. The remaining Tables 19 through 25 to illustrate the rest of the groupings can be found in Appendix E.

Table 19 provides the information that Pay is ranked greatest on an interval scale in the administrators' perception of what people want in the selection of a job (job preference) at the University of Guam. The least chosen as shown in the scale is Hours.

Table 20 presents the interval scale of factors showing that Interesting Work is the most preferred satisfaction factor in the ranking by faculty members, and the least preferred satisfaction factor is Tactful Disciplining.
### Table 18

**Derivations of an Interval Scale from Normal Deviates among Faculty Members**

#### Preferential Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement</td>
<td>.000</td>
<td>-.152</td>
<td>-.351</td>
<td>-.264</td>
<td>-.632</td>
<td>.124</td>
<td>-.096</td>
<td>-.565</td>
<td>.596</td>
</tr>
<tr>
<td>Benefits</td>
<td>.152</td>
<td>.000</td>
<td>-.502</td>
<td>-.014</td>
<td>-.351</td>
<td>.208</td>
<td>-.124</td>
<td>-.440</td>
<td>.972</td>
</tr>
<tr>
<td>Company</td>
<td>.351</td>
<td>.502</td>
<td>.000</td>
<td>.596</td>
<td>-.069</td>
<td>.124</td>
<td>.208</td>
<td>.124</td>
<td>1.292</td>
</tr>
<tr>
<td>Co-Workers</td>
<td>.264</td>
<td>.014</td>
<td>-.596</td>
<td>.000</td>
<td>-.440</td>
<td>.322</td>
<td>-.069</td>
<td>-.470</td>
<td>1.111</td>
</tr>
<tr>
<td>Hours</td>
<td>.632</td>
<td>.351</td>
<td>.069</td>
<td>.440</td>
<td>.000</td>
<td>.736</td>
<td>.470</td>
<td>.096</td>
<td>1.065</td>
</tr>
<tr>
<td>Pay</td>
<td>-.124</td>
<td>-.208</td>
<td>-.124</td>
<td>-.322</td>
<td>-.736</td>
<td>.000</td>
<td>-.152</td>
<td>-.811</td>
<td>.655</td>
</tr>
<tr>
<td>Security</td>
<td>.096</td>
<td>.124</td>
<td>.208</td>
<td>.069</td>
<td>.470</td>
<td>.152</td>
<td>.000</td>
<td>-.069</td>
<td>.866</td>
</tr>
<tr>
<td>Supervisor</td>
<td>.565</td>
<td>.440</td>
<td>-.124</td>
<td>.470</td>
<td>-.096</td>
<td>.811</td>
<td>.069</td>
<td>.000</td>
<td>1.156</td>
</tr>
<tr>
<td>Type of Work</td>
<td>-.596</td>
<td>-.972</td>
<td>-1.292</td>
<td>-1.111</td>
<td>-1.965</td>
<td>-.665</td>
<td>-.886</td>
<td>-1.156</td>
<td>.000</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>-.014</td>
<td>.014</td>
<td>-.351</td>
<td>.351</td>
<td>-.351</td>
<td>.124</td>
<td>.152</td>
<td>-.470</td>
<td>1.111</td>
</tr>
</tbody>
</table>

**Sum**  
1.326  .113  -3.480  .216  -4.211  1.937  -4.29  -3.761  8.854

**Average**  
.133  .011  -.348  .022  -.421  .194  -.043  -.376  .885

**Items**  
5  8  3  10  7  2  4  1  6  9

**Final Scale**  
.000  .045  .073  .365  .378  .432  .443  .544  .615  1.307
As perceived by the administrators, Promotion is considered the most important job satisfaction factor as illustrated in Table 21. Good Wages is also deemed by the administrators as an important factor. The Final Scale of factors indicated Promotion's position as number one and that Tactful Disciplining is deemed least important by administrators.

Table 22 shows the interval scale from normal deviates among male faculty members for job preferential factors. This scale shows that Type of Work, the most preferred factor, and Pay are the main personal influential factors for job selection at the University of Guam by the male faculty members. In contrast, Company is the least dominant factor.

The Final Scale row in Table 23 provides the information that Type of Work (1) is most preferred and Company (10) is least preferred by female faculty members of preferential factors for job selection at the University of Guam.

The interval scale in Table 24 indicates that Interesting Work (1) is most liked and Tactful Disciplining (10) is least liked by male faculty members for job satisfaction.

Table 25 shows a similar ranking as that in Table 24 for job satisfaction factors. Interesting Work (1) and Good Wages (2) are shown in Table 25 as the dominant satisfaction
factors for female faculty members, and Tactful Disciplining (10) is considered least important.

Description of Statistical Testing of the Hypotheses

Program for statistical testing of the data was computed by the use of the Statistical Package for Social Sciences (SPSSX) (Nie et al., 1975). The SPSSX procedure provides a program for contingency table analysis through the use of the subprograms CROSSTABS. CROSSTABS produces a two-way to n-way crosstabulation for variables.

Crosstabulation is a joint frequency distribution of cases according to two or more classificatory variables. The display of the distribution of cases by their position on two or more variables is the chief component of contingency table analysis and is indeed the most commonly used analytic method in the social sciences. These joint frequency distributions can be statistically analyzed by certain tests of significance, e.g., the chi-square statistic, to determine whether or not the variables are statistically independent; and these distributions can be summarized by a number of measures of association, such as the contingency coefficient, phi, tau, gamma, etc., which describe the degree to which the values of one variable predict or vary with those of another. Finally, partial gammas may be calculated,
measuring the relationship between two variables controlling for other variables (Nie et al., pp. 218-219).

To use crosstab and chi-square statistical testing, the data were prepared for analysis. The data were compared with a two-way variable analysis according to faculty members and administrators and male and female faculty members. The chi-square program computes the cell frequencies and then compares the expected frequency with the actual frequency. The greater the discrepancies between the two frequencies, the larger chi-square becomes. The number of rows and columns determine the degrees of freedom and is calculated to give the exact probability of the chi-square value being statistically independent. The chi-square indicates whether a relationship between the given variables exist but the strength of the relationship has to be determined by an adjusted chi-square contingency coefficient (Marshall, 1990).

**Statistical Testing of Hypotheses**

A 2 X 10 chi-square analysis test was performed to determine whether the frequency of the group responses differed among the 10 treatment groups. Tables 26 to 29, as found in Appendix E, illustrate the expected frequency with the actual frequency. For hypothesis 1 the obtained $X^2 = 33.35$, $df = 9$ was significant at the .05 level. For hypothesis 2 the obtained $X^2 = 39.53$, $df = 9$ was
significant at the .05. The obtained $X^2 = 22.12, df = 9$ for hypothesis 3 was significant at the .05 level. In hypothesis 4 the obtained $X^2 = 11.35$ was not significant at the .05 level. The hypotheses that there will be no significant difference between faculty members and administrators and male and female faculty members with regard to their perception of factors used in job preference and job satisfaction at the University of Guam were rejected. However, hypothesis 4 for the male and female faculty members in respect to job satisfaction factors was accepted. Tables 10, 12, and 14 show the distribution of frequencies across the ten factors between the faculty members and administrators and male and female faculty members. Tables 18 to 23 display the interval rankings that were found to exist between the faculty members and administrators and male and female faculty members. Since differences existed between the groups across the 10 factors, a post hoc analysis was applied to determine which factors were different on the crosstabulation.

Additional Findings

Post hoc Analysis

As shown in Tables 30 through 35 (see Appendix E) a post hoc analysis (a posteriori) was developed to determine where the exact significant differences lie after a significant chi-square has been obtained. This treatment
tests whether an item was chosen a significant number of times over the other item each time it appeared as a choice for the respondents at the University of Guam. The SPSSX computer program at Texas Woman's University was utilized to differentiate the differences among factors.

Tables 30 through 35 show the post hoc analysis of chi-square analysis of choices of faculty members, administrators, and male and female faculty members separately on job preference and job satisfaction factors. This treatment tests whether a factor was chosen a significant number of times over the other factors each time it appeared as a choice for the respondents.

Table 30 illustrates that when Type of Work is paired with other factors, faculty members significantly selected this factor more often. Tables 31 through 35 show the factors that were significantly different in each of the other groups as they relate to significant chi square (see Appendix E).
Table 30

Post Hoc Analysis of Job Preferential Factors of Faculty Members \((n = 91)\)

<table>
<thead>
<tr>
<th>Pairs</th>
<th>Value</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement - Company</td>
<td>1.97</td>
<td>.05</td>
</tr>
<tr>
<td>Advancement - Hours</td>
<td>2.25</td>
<td>.05</td>
</tr>
<tr>
<td>Advancement - Supervisor</td>
<td>2.06</td>
<td>.05</td>
</tr>
<tr>
<td>Advancement - Type of Work</td>
<td>2.58</td>
<td>.05</td>
</tr>
<tr>
<td>Benefits - Type of Work</td>
<td>3.05</td>
<td>.05</td>
</tr>
<tr>
<td>Company - Pay</td>
<td>2.12</td>
<td>.05</td>
</tr>
<tr>
<td>Company - Type of Work</td>
<td>4.55</td>
<td>.05</td>
</tr>
<tr>
<td>Co-workers - Type of Work</td>
<td>3.10</td>
<td>.05</td>
</tr>
<tr>
<td>Hours - Pay</td>
<td>2.40</td>
<td>.05</td>
</tr>
<tr>
<td>Hours - Type of Work</td>
<td>4.83</td>
<td>.05</td>
</tr>
<tr>
<td>Pay - Supervisor</td>
<td>2.21</td>
<td>.05</td>
</tr>
<tr>
<td>Pay - Type of Work</td>
<td>2.43</td>
<td>.05</td>
</tr>
<tr>
<td>Security - Type of Work</td>
<td>3.28</td>
<td>.05</td>
</tr>
<tr>
<td>Supervisor - Type of Work</td>
<td>4.64</td>
<td>.05</td>
</tr>
<tr>
<td>Type of Work - Working Conditions</td>
<td>3.40</td>
<td>.05</td>
</tr>
</tbody>
</table>

Chapter V will present a summary, discussion of the findings, conclusions, implications, and recommendations.
CHAPTER BIBLIOGRAPHY


CHAPTER V

SUMMARY, DISCUSSION OF FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter includes a summary of the study, discussion of the findings, conclusions based on the findings, and implications drawn from the findings. Recommendations for future studies are presented based upon the experiences of the researcher during the present investigation.

Summary of the Study

The purposes of this research were (a) to determine and analyze differences between faculty members' and administrators' and male and female faculty members' career perception on job preferential and job satisfaction factors in what faculty members want from a job at the University of Guam and (b) to determine the hierarchy and valence of each factors' position.

Chapter I underlined the justification for the investigation, the statement of the problem, the definitions and/or explanation of terms, the limitations of the study, the procedures of collecting data, and the procedures for the analysis of the data. Chapter II entailed a review of the literature which presented representative studies on the
brief history of Guam and the University of Guam, the forerunner of schools of management in job satisfaction, scientific management and human relations, the Herzberg's Two-Factor theory, and the research in job preferential and job satisfaction factors. The investigator found job preferential studies that were insular to industrial settings but not to institutions of higher learning. Also, using the paired-comparison technique, one job satisfaction factor study in institutions of higher education was found. Chapter III contained the procedures followed in the development of the investigations. The procedures were discussed under the following headings: population and sample, description of research instrument, data collection procedure, and statistical analysis of the data.

Data for this research were collected during the spring of 1990. Using the 1989-1990 University of Guam undergraduate and graduate catalogs obtained from the President's office, respondents (N = 199) used were full-time faculty members and full-time and part-time administrators consensually sampled. The survey instrument utilized for this investigation was the paired-comparison technique. The paired-comparison test was developed by L. L. Thurstone in 1927 for the purpose of estimating the probability that a randomly selected subject will rank a particular object above another in all possible pairs for a given set.
Using consensus sampling, 199 paired-comparison questionnaires were distributed to full-time faculty members and full-time and part-time administrators. One hundred twenty-three respondents (n = 91 faculty members and n = 32 administrators) qualified for the investigation and for analysis. The overall number of respondents was 123 of the 199. Faculty members responded to the survey at a rate of 57.2%; and the administrators responded at a rate of 80.0%. The combined overall response rate was 62%. The data included data entry scoring of each subjects' response to the paired-comparison questionnaire.

Initial distribution and follow-up collection instructions form was issued to the designated proxy (see Appendix D). One week after the initial distribution of the questionnaires to the faculty members and administrators, three follow-up letters along with questionnaires were sent at two-week intervals as reminders to complete and return the questionnaires, and follow-up intervention was done by the proxy (see Appendix D). Data collection was terminated by the latter part of May.

The Statistical Package for Social Science computer program with cross-tab subprogram was used to yield the contingency tables and chi-square test of significance. Post hoc (a posteriori) analysis was developed to help the investigator find out exactly where the significant difference lies after a significant chi-square has been
obtained. The SPSSX computer program at Texas Woman's University was used to differentiate the difference among factors.

The review of the literature found no specific studies on institutions of higher education faculty members' career perception on job preferential and job satisfaction factors. The present investigation, therefore, was conducted to identify the sentiment motives of the faculty members at the University of Guam.

Summary of the Findings

A paired-comparison questionnaire was utilized for data collection. The survey questionnaires were administered to 199 faculty members and administrators at the University of Guam, Mangilao. Information gathered from the questionnaire included demographic information about the respondents and identified their sentimental motives for career insight and identity. Job preferential and job satisfaction factors for faculty members sentiment motives were ranked according to the number of times an item was chosen. These data were treated by PCSTATS paired-comparison program (Marshall, 1990).

The findings based upon the responses on 123 faculty members and administrators are summarized according to the hypotheses which guided the development of this research. The data presented in Chapter IV comprised the basis for the
rejection and acceptance of stated hypotheses. The hypotheses were rejected and accepted at the .05 level of significance. Tables 1 through 35 display the data for the reader's reference and convenience.

A summary of the findings of descriptive information regarding the respondents in the investigation is as follows:

1. The 123 respondents participating in the investigation were 32 female faculty members, 59 male faculty members and 32 administrators.

2. One hundred ninety-nine survey questionnaires were distributed, 159 (79.9%) for the faculty members and 40 (20.1%) for the administrators.

3. Survey analysis was done to establish ordinal and interval positions on factors influencing faculty members' motives and administrators' perceptions for career insight and identity at the University of Guam.

4. Fifty-three percent of the faculty members who participated in the study were from the ages of 45 years and over. Males made up 63% of the sampled population and 37% were females.

5. The sampled respondents reported 60% of an ethnic background of White. The other five combined categories summed to 40% (Pacific Islanders (27%) and others (13%)).

6. Eighteen percent were classified full professor for the faculty members. A large proportion of the professors
(38.5%) have the title of Associate Professor, whereas 22% were assistant professors and 17% were instructors.

7. The Offices of Academic and Administrative Affairs included 28% of the administrator respondents, whereas 40% were Department Administrators and 25% were from the Office of the President.

8. Over 65% of the faculty members who participated in the study were classified undergraduate and 19.8% were classified graduate.

9. Over 49.5% of the faculty members who participated in the study had been employed with the University of Guam 7 or more years.

10. Over 31.3% of the administrators were employed with the university 2 years and under. Over 34.4% of the administrators who participated in the study were employed with the University of Guam for 9 years or more.

11. According to frequency ranking, job preferential motives as identified by faculty members were (1) type of work, (2) pay, (3) advancement, (4) co-workers, (5) benefits, (6) security, (7) working conditions, (8) company, (9) supervisor, and (10) Hours. This concurred with the interval ranking for standard scores on the factors.

12. As concurred by the Z-scores ranking, administrators' job preferential factors frequency rankings were (1) pay, (2) advancement, (3) type of work, (4)
security, (5) benefits, (6) working conditions, (7) co-workers, (8) supervisor, (9) company, and (10) hours.

13. Faculty members' frequency rankings of job satisfaction factors were (1) interesting work, (2) good wages, (3) promotion, (4) appreciation, (5) working conditions, (6) job security, (7) management loyalty, (8) in on things, (9) understanding, and (10) tactful disciplining. These factors' position reflected the interval scale ranking.

14. Administrators rankings of job satisfaction factors were (1) good wages, (2) promotion, (3) job security, (4) interesting work, (5) appreciation, (6) working conditions, (7) in on things, (8) management loyalty, (9) understanding, and (10) tactful disciplining. Interval scale ranking showed that position number 1 and number 2 interchanged order, but the post hoc analysis showed no difference between the two items. The other factors remained in the same order with interval ranking as shown by frequency ranking.

15. Male faculty members' job preferential factor rankings were (1) type of work, (2) pay, (3) advancement, (4) working conditions, (5) benefits, (6) security, (7) co-workers, (8) company, (9) supervisor, and (10) hours. Interval scaling of preference showed the same order of the factors.
16. Female faculty members ranked their job preferential factors as (1) type of work, (2) pay, (3) co-workers, (4) advancement, (5) benefits, (6) security, (7) working conditions, (8) hours, (9) supervisor, and (10) company. Interval scale ranking showed the same factors' position with exception of position 7 and 8 interchanged, but post hoc analysis showed no difference between the two items in terms of most preferred.

17. The order of job satisfaction factors by male and female faculty reflected agreement between the two groups and ranked seven of the ten factors in the same order (1) interesting work, (2) good wages, (3) promotion, (4) appreciation, (5) working conditions, (9) understanding, and (10) tactful disciplining. These results were also supported by the interval scale ranking.

18. A post hoc analysis was utilized to determine differences among factors.

19. All factors as ranked by the faculty members and administrators were statistically confirmed.

20. Ten factors were selected to determine job preferential and job satisfaction factors as sentiment motives for career insight and identity at the University of Guam.

A summary of findings as they relate to the hypotheses reveals the following (refer to Tables 26 through 28 in Appendix E):
1. There is no significant difference between administrators and faculty members on job preferential factors. **Rejected**

2. There is no significant difference between administrators and faculty members on job satisfaction factors. **Rejected**

3. There is no significant difference between male faculty members and female faculty members on career job preferential factors. **Rejected**

4. There is no significant difference between male faculty members and female faculty members on job satisfaction factors. **Accepted**

Tables 30 through 35 illustrate the summary of the findings as they relate to post hoc analysis as follows:

1. **Type of work** was significantly most preferred by faculty members on job preferential factors for job selection over the other factors.

2. **Pay** was chosen more often as job preferential factor by the administrators against other factors. Although pay was chosen more often than any other factor, the distance between rank 1 and rank 2 were not significant.

3. Although **interesting work** was selected more often by faculty members on job satisfaction over the other factors, good wages and promotion, the distances between rankings 1, 2, and 3 were not significant.
4. Though good wages and promotion were more often selected as job satisfaction factors by the administrators over the other motive factors, they were not significantly different.

5. Type of work is significantly most preferred by male faculty members for job preferential motives when compared with other factors.

6. Although type of work was selected more often by female faculty members on job preferential factors over the other factors in frequency ranking, it was not significantly preferred over ranks 2, 3, 4, and 5.

Conclusions

A summary of the results of the treatment and analysis of the data allowed the researcher to draw the following conclusions in regards to the purposes of the research as stated in Chapter 1:

1. There are some disagreements between the faculty members and administrators in many of the job preferential factors for career insight and identity.

2. Disagreements between the faculty members and administrators are apparent in many of the job satisfaction factors for job insight and identity.

3. Disagreement exists between male and female faculty members in many of the job preferential factors for employment insight at the University of Guam.
4. Agreement exists between male and female faculty members in sentiment motives of job satisfaction for career insight and identity.

5. Type of Work is significantly most preferred to faculty members in their job preferential decision-making process for employment at the University of Guam.

6. Pay and Advancement are of equal significance for job preferential motive factors by administrators in relation to others' job preference for employment at the University of Guam.

7. Type of Work is significantly most preferred by male faculty members in their job preferential decision-making process for employment.

8. Type of Work, Pay, Co-workers, Advancement, and Benefits are of equal importance on job preferential factors for female faculty members for employment at the University of Guam.

9. Interesting Work, Good Wages, and Promotion are statistically of equal importance to faculty members in regards to job satisfaction for continued employment at the University of Guam.

10. Promotion, Good Wages, and Job Security are equally important to administrators' perception of others' job satisfaction for continued employment.
11. Male and female faculty members are congruent in their choices of job satisfaction factors for continued employment at the University of Guam.

12. Proportional representation at the University of Guam shows a greater percentage of white ethnic background.

Implications

From the investigator's knowledge, this research is the first of its kind using both job preferential and job satisfaction factors at a university level using faculty and administrator subjects and the first of its kind at the doctoral dissertation level.

This study involves the university in the island of Guam which is unique in its environment due to its ethnic composition and geographic position in the Western Pacific and proximity to the Philippines, Japan, Korea, and China. The commercialization by these countries is a factor in the economic development of the island. The University of Guam, as a major institution of higher learning in the Western Pacific, influences the entire developmental issue. In addition, the nearby islands of Micronesia and the Marianas will also be significantly impacted by the University of Guam and the business developments on Guam. This study which aids in closing the gap between the mission and the actualities at UOG, supports the visionary statement by
Pedro Sanchez (1972), the first president of the University of Guam, concerning the "vital role" of the university.

Based on the overall views in Chapter 2 from authorities in the area of job preferential and job satisfaction motivational factors for career insight and identity as well as the viewpoints of the 123 respondents in this investigation, several implications are drawn from the findings of the study and the investigator's interpretation of these findings.

As seen in Tables 26 to 28, it is apparent that faculty members and administrators present a degree of disagreement among ranked factors and a degree of importance among factors in their decision-making process for job insight and identity.

The faculty members gave evidence in this investigation that they would choose the University of Guam for employment on the basis of Type of Work. This study did support the 30-year study for females by Jurgensen (1978). Within Jurgensen's study, Type of Work was not considered the most important factor for males, but has since gradually replaced the number one ranked Security. This finding concurred with the findings of Thornton (1983) that Type of Work was the most important factor. The evidence shows that the administrators acknowledge that Pay and Advancement are dominant factors for faculty members to choose employment at the University of Guam. The subgroups of faculty members,
male and female, agree that Type of Work and Pay are both equally important in seeking employment. It can be recognized that there are different perceived sentimental factors between the faculty members and administrators that influence prospective employment at the University of Guam. This substantiated London's (1987) statement that employees' career preference is based upon their interests.

By understanding the job insights and job identity of the applicants and faculty members at the University of Guam, hiring personnel can achieve the goals of the university by understanding the preferences of applicants for job commitment. Identifying the job preference components of a given job is an integral part of job stability. Accurate knowledge of job preferences is a valuable aid in the selection, placement, and transfer processes (Mathis & Jackson, 1985).

The faculty members gave evidence through their choices that they are motivated by Interesting Work and Good Wages as the job satisfaction factors at the University of Guam. This investigation supports Adler's (1988) finding that Interesting Work is the number one job satisfaction factor but placed Wages as the third ranking. However, this study used a post hoc analysis which gave evidence that Interesting Work, Good Wages, and Promotion are of comparable importance. The male and female subgroups were congruent in their choices in job satisfaction. The
University of Guam faculty assessment study (1990) indicated that dissatisfaction with the salary was just one factor in faculty members wanting to leave the university. Just as this study identified Promotion as an important factor, the University of Guam included in its recommendations a formalized training and development program.

The post hoc evidence shows that administrators perceive faculty members to be motivated more by Good Wages, Promotion, and Job Security than other factors. Throughout the history of management study (Duncan, 1989) Good Wages has been commonly considered as the strongest motivating force, but as this study shows, other factors including Promotion and Interesting Work must be considered simultaneously in stimulating employee job satisfaction.

This research supports the findings of Adler (1988), Jurgensen (1978), and the UOG faculty assessment study in relation to ranking the factors of job preference and job satisfaction. However, this research treated the rankings by using the law of comparative judgment and post hoc analysis for chi square. This procedure allows for judgments of "greater than" and also selection of factors significantly most preferred over other factors when paired.

As shown by the descriptive data, the high percentage of whites on the educator staff at the University of Guam is contrary to the proportion of native-born Guamanians. This
proportional discrepancy is also shown in the male and female educator sample population.

Overall, the success and failure of personnel and administrative relationships is based on accurate information in designing and revising personnel policies and practices, including recruitment programs, supervisory training, diagnosis of employee morale, collective bargaining, and interviewing job applicants.

Recommendations

Based on the study's findings the researcher offers the following recommendations:

1. A replication of the present study utilizing the secondary public school district and community college and other agencies on Guam
2. A replication of the present study by the Guam Teachers' Union
3. A replication of the present study on an on-going basis
4. A replication of the present study utilizing a comparably-sized university in the United States to compare the findings
5. Continued research into job preference and job satisfaction in institutions of higher education
6. Research into the recruitment and retention practices at the University of Guam
7. A development of policies for recruitment of under-represented groups such as by ethnic background, degree, and gender

8. A study of the turnover rate of the faculty members and its implications at the University of Guam.
APPENDIX A

GUAM AND WESTERN PACIFIC MAPS
A BEAUTIFUL ISLAND IN THE WORLD

WHERE AMERICA'S DAY BEGINS

GUAM

HUB OF THE PACIFIC

GATEWAY TO MICRONESIA

ATLANTIC OCEAN

NEW ZEALAND

PACIFIC OCEAN

VANUATU

MICRONESIA

PAPUA NEW GUINEA

AUSTRALIA

GUAM

KOREA

JAPAN

WHERE AMERICA'S DAY BEGINS
Mariana Islands District
Trust Territory of the Pacific Islands

Maus Is.

Asuncion Is.

Munng Is.

Agrigan Is.

Pagan Is.

Alamagan Is.

Sarigan Is.

Anathan Is.

Farallon de Medinilla

Saipan Is.

Tinian Is.

Rota Is.

Guam Is.

Cocos L.
NOTE: GOVT APPROVED SWIMMING BEACHES ARE UNDERLINED (I.E., GARGAS BEACH)
APPENDIX B

RESEARCH APPROVALS
July 6, 1989

Mr. Bob Santos  
Doctoral Student  
University of North Texas  
Department of Higher and Adult Education  
College of Education  
P.O. Box 13857  
Denton, Texas 76203-3857

Dear Mr. Santos:

Thank you for your June 22 letter informing us of your progress in your doctoral program and requesting permission to conduct a study on the University of Guam. We look forward to the findings of your study on employment determinants as perceived by UOG faculty and administrators. Permission, therefore, is granted for you to proceed with your study.

I am enclosing our latest campus directory and university graduate and undergraduate catalog. Please let me know if you need additional information.

Please do not hesitate to let me know if I can be of further assistance. By a copy of this letter, I am informing our Academic Vice President, Dr. Roy Tsuda, and Chairman of the Faculty Council, Dr. John Rider, that I am encouraging your study. I am sure that they too will be pleased to hear of your proposed study and would be helpful.

Best wishes.

Sincerely,

WILFRED P. LEON GUERRERO  
President

Enclosures

cc: Academic Vice President  
Chair, Faculty Council
January 16, 1990

TO: Research Committee for Mr. Robert Santos

FR: Bettye Myers, Professor

RE: Research design and data analysis schema for his dissertation

As a professor and director of educational research, I believe this dissertation research design and data analysis schema as regards the method of paired comparison conforms to the requirements for descriptive research. I have personally used the paired comparison technique in my own research (published in referred journals) and have written about its use and how to use it in one of my own books. In addition, a number of my doctoral students have used this instrument for their dissertations and the results of their research have been published.

No authorization letter is necessary from authors to use the factors in Mr. Santos' research because of "common domain". The paired comparison technique is widely used in industrial psychology and social psychology and I am delighted to see that its use in educational research is finally beginning to become familiar to researchers.

I look forward to receiving the results of Mr. Santos' research to compare it with my own data from hospitals, nursing homes, public schools and universities in the States.
University of North Texas
Office of Research and Academic Grants

January 22, 1990

Robert Santos
317 Egan
Denton, Texas 76201

Dear Mr. Santos:

Your proposal entitled, "Faculty and Administrators' Job Preferential and Job Satisfaction Factors at the University of Guam" has been reviewed under the Exemption Category Rule #3 and is exempt from further review under 45 CFR 46.101.

You will need to inform your subjects of all elements of consent in your cover letter, written consent will not be necessary.

If you have any questions, please contact me at 817-565-3946.

Good luck on your project.

Sincerely,

Peter Witt
Chairman
Institutional Review Committee

sl
To the Participants:

Dr. John P. Eddy, Professor at University of North Texas, Robert D. Santos, doctoral student, and the following faculty committee members:

Jack Watson, EdD
William A. Miller, Jr., PhD
John T. Thompson, PhD

appreciate your cooperation in the completion of all of the following questions in this booklet. You will be in no physical or emotional discomfort or risk. All the information obtained in this study is for the express purpose of research and will be held in the strictest of confidence.

This doctoral research at the University is interested in the study of attitudes in the work environment. Upon completion of the study, we shall supply your administrator (president and chairperson of the faculty council) with the results.

We thank you for your cooperation and effort in helping us to acquire some important knowledge regarding the attitudes of members of the workforce. Your reward of participation in this study will be in your cooperation in furthering the knowledge of science.

Please turn the page and begin.
Instructions: Please check or respond in writing to the following items: (Do not put your name on this booklet.)

The following data about yourself are helpful for research purposes:

1. Your age:
   - ( ) 29 and under
   - ( ) 30-34
   - ( ) 35-39
   - ( ) 40-44
   - ( ) 45-49
   - ( ) 50-54
   - ( ) 55 or over

2. Your gender:
   - ( ) male
   - ( ) female

3. Ethnic Background:
   - ( ) White
   - ( ) Black
   - ( ) Hispanic
   - ( ) Oriental
   - ( ) Pacific Islander
   - ( ) Other (Please specify) 

4. Position title:
   - Administrator:
     - ( ) Office of the President
     - ( ) Office of Administrative Affairs
     - ( ) Department Administrators (chairpersons)

5. Years in this organization:
   - ( ) 2 years and under
   - ( ) 3-4 years
   - ( ) 5-6 years
   - ( ) 7-8 years
   - ( ) 9 years or over
JOBS PREFERENCES
(What do you want from a job?)

Listed below are ten factors that faculty members use for job selection. In front of each statement, in CAPITAL letters, is the word or phrase which will be used throughout the questionnaire instead of the full statement.

ADVANCEMENT ------ Opportunity for promotion
BENEFITS -------- Vacation, sick pay, insurance, etc.
COMPANY --------- Employment by company (University of Guam) you are proud to work for
CO-WORKERS ------ Fellow workers who are pleasant, agreeable, and good working companions
HOURS ---------- Good starting and quitting time, good number of hours per day or week, day or night work, etc.
PAY --------------- Large income during year
SECURITY -------- Steady work, no layoffs, sureness of being able to keep your job
SUPERVISOR ------ A good boss who is considerate and fair
TYPE OF WORK ------ Work which is interesting and which you like
WORKING CONDITIONS - Comfortable and clean—no objectionable noise, heat, cold, odors, etc.

PLEASE CIRCLE THE FACTOR--IN EACH PAIR BELOW--WHICH IS MOST IMPORTANT TO YOUR FACULTY MEMBERS IN RELATION TO JOB SELECTION. (Complete the exercise below as if he/she were applying for employment at the University of Guam.)

Pay ------------ Company
Hours ------------- Benefits
Co-workers ---- Working Conditions
Supervisor -------- Type of Work
Security ----------- Advancement
Benefits ------------ Pay
Company ------ Working Conditions
Hours ------------- Type of Work
Co-worker ---------- Advancement
Supervisor -------- Security
Pay -------------- Working Conditions
Benefits ------------- Type of Work
Company ----------- Advancement
Hours ------------- Security
Co-workers -------- Supervisor
Type of Work --------- Pay
Working Conditions --- Advancement
Benefits ------------ Security
Company ----------- Supervisor
Hours ------------- Co-worker
Pay -------------- Advancement
Type of Work --------- Security
Working Conditions ---- Supervisor
Benefits ---------- Co-workers
Company --------- Advancement
Security ----------- Hours
Pay --------------- Supervisor
Advancement --------- Co-workers
Type of Work --------- Co-workers
Working Conditions -------- Hours
Benefits ---------- Company
Pay --------------- Supervisor
Security ----------- Co-workers
Advance -------------- Hours
Type of Work ------- Company
Working Conditions --- Benefits
Co-workers ------------- Pay
Supervisor ----------- Hours
Security ------------- Company
Advance -------------- Benefits
Type of Work --- Working Conditions
Pay ------------- Company
Co-workers ------------- Company
Supervisor ----------- Benefits
Security -------- Working Conditions
Advance -------------- Type of Work

Please continue on next page.
Listed below are ten factors that faculty members want from their jobs. In front of each statement, in **CAPITAL** letters, is the word or phrase which will be used throughout the questionnaire instead of the full statement.

- **GOOD WAGES**
- **JOB SECURITY**
- **INTERESTING WORK**
- **TACTFUL DISCIPLINING**
- **IN ON THINGS**
- **WORKING CONDITIONS**
- **MANAGEMENT LOYALTY**
- **APPRECIATION**
- **PROMOTION**
- **UNDERSTANDING**

PLEASE CIRCLE THE FACTOR—IN EACH PAIR BELOW—which is MOST IMPORTANT TO YOUR FACULTY MEMBERS IN RELATION TO HIS/HER JOB. (Complete the exercise below as if he/she were employed at the University of Guam.)

| Working conditions —— Interesting Work | Job Security —— Tactful Disciplining |
| In On Things —— Job Security |
| Tactful Disciplining —— Understanding |
| Appreciation —— Promotion |
| Management Loyalty —— Good Wages |
| Job Security —— Working Conditions |
| Interesting Work —— Understanding |
| In On Things —— Promotion |
| Tactful Disciplining —— Good Wages |
| Appreciation —— Management Loyalty |
| Working Conditions —— Understanding |
| Job Security —— Promotion |
| Interesting Work —— Good Wages |
| In On Things —— Management Loyalty |
| Tactful Disciplining —— Appreciation |
| Promotion —— Working Conditions |
| Understanding —— Good Wages |
| Job Security —— Management Loyalty |
| Interesting Work —— Appreciation |
| In On Things —— Tactful Disciplining |
| Working Conditions —— Good Wages |
| Promotion —— Management Loyalty |
| Understanding —— Appreciation |
To the Participants:

Dr. John P. Eddy, Professor at University of North Texas, Robert D. Santos, doctoral student, and the following faculty committee members:

Jack Watson, EdD
William A. Miller, Jr., PhD
John T. Thompson, PhD

appreciate your cooperation in the completion of all of the following questions in this booklet. You will be in no physical or emotional discomfort or risk. All the information obtained in this study is for the express purpose of research and will be held in the strictest of confidence.

This doctoral research at the University is interested in the study of attitudes in the work environment. Upon completion of the study, we shall supply your administrator (president and chairperson of the faculty council) with the results.

We thank you for your cooperation and effort in helping us to acquire some important knowledge regarding the attitudes of members of the workforce. Your reward of participation in this study will be in your cooperation in furthering the knowledge of science.

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The following data about yourself are helpful for research purposes:

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   - ( ) 30-34
   - ( ) 35-39
   - ( ) 40-44
   - ( ) 45-49
   - ( ) 50-54
   - ( ) 55 or over

2. Your gender:
   - ( ) male
   - ( ) female

3. Ethnic Background:
   - ( ) White
   - ( ) Black
   - ( ) Hispanic
   - ( ) Oriental
   - ( ) Pacific Islander
   - ( ) Other (Please specify) __________

4. Position title:
   - Faculty:
     - ( ) Instructor
     - ( ) Assistant Professor
     - ( ) Associate Professor
     - ( ) Full Professor

5. Faculty status:
   - ( ) Undergraduate
   - ( ) Graduate

6. Years in this organization:
   - ( ) 2 years and under
   - ( ) 3-4 years
   - ( ) 5-6 years
   - ( ) 7-8 years
   - ( ) 9 years or over
JOB PREFERENCES
(What do you want from a job?)

Listed below are ten factors that faculty members use for job selection. In front of each statement, in CAPITAL letters, is the word or phrase which will be used throughout the questionnaire instead of the full statement.

ADVANCEMENT ------- Opportunity for promotion
BENEFITS ---------- Vacation, sick pay, insurance, etc.
COMPANY ---------- Employment by company (University of Guam) you are proud to work for
CO-WORKERS ------- Fellow workers who are pleasant, agreeable, and good working companions
HOURS ----------- Good starting and quitting time, good number of hours per day or week, day or night work, etc.
PAY ---------- Large income during year
SECURITY ------- Steady work, no layoffs, sureness of being able to keep your job
SUPERVISOR ------- A good boss who is considerate and fair
TYPE OF WORK ------- Work which is interesting and which you like
WORKING CONDITIONS - Comfortable and clean--no objectionable noise, heat, cold, odors, etc.

PLEASE CIRCLE THE FACTOR--IN EACH PAIR BELOW--WHICH IS MOST IMPORTANT TO YOU IN RELATION TO JOB SELECTION. (Complete the exercise below as if you were applying for employment at the University of Guam.)

<table>
<thead>
<tr>
<th>Pay</th>
<th>Company</th>
<th>Hours</th>
<th>Benefits</th>
<th>Co-workers</th>
<th>Advancement</th>
<th>Type of Work</th>
<th>Security</th>
<th>Supervisor</th>
<th>Working Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please continue on next page.
Listed below are ten factors that faculty members want from their jobs. In front of each statement, in CAPITAL letters, is the word or phrase which will be used throughout the questionnaire instead of the full statement.

GOOD WAGES Good Wages
JOB SECURITY Job Security
INTERESTING WORK Interesting Work
TACTFUL DISCIPLINING Tactful Disciplining
IN ON THINGS Feeling "in" On Things
WORKING CONDITIONS Good Working Conditions
MANAGEMENT LOYALTY Management Loyalty to Workers
APPRECIATION Full Appreciation for Work Done
PROMOTION Promotion and Growth in Company
UNDERSTANDING Sympathetic Understanding of Personal Problems

PLEASE CIRCLE THE FACTOR--IN EACH PAIR BELOW--WHICH IS MOST IMPORTANT TO YOU IN RELATION TO YOUR JOB. (Complete the exercise below as if you were employed at the University of Guam.)

Working conditions — Interesting Work
In On Things —— Job Security
Tactful Disciplining — Understanding
Appreciation —— Promotion
Management Loyalty — Good Wages
Job security —— Working Conditions
Interesting Work — Understanding
In On Things —— Promotion
Tactful Disciplining — Good Wages
Appreciation — Management Loyalty
Working Conditions — Understanding
Job Security —— Promotion
Interesting Work —— Good Wages
In On Things — Management Loyalty
Tactful Disciplining —— Appreciation
Promotion — Working Conditions
Understanding — Good Wages
Job Security — Management Loyalty
Interesting Work —— Appreciation
In On Things — Tactful Disciplining
Working Conditions — Good Wages
Promotion — Management Loyalty
Understanding —— Appreciation

Job Security —— Tactful Disciplining
Interesting Work —— In On Things
Management Loyalty — Work Conditions
Good Wages —— Appreciation
Promotion —— Tactful Disciplining
Understanding — In On Things
Job Security — Interesting Work
Working Conditions — Appreciation
Management Loyalty — Tactful Disciplining
Good Wages —— In On Things
Promotion — Interesting Work
Understanding — Job Security
Tactful Disciplining — Work Conditions
Appreciation — In On Things
Management Loyalty — Interesting Work
Good Wages —— Job Security
Promotion —— Understanding
Working Conditions — In On Things
Tactful Disciplining — Interesting Work
Appreciation —— Job Security
Management Loyalty —— Understanding
Good Wages ———— Promotion

SI YUUSS MASSE
APPENDIX D

PROXY INFORMATION
Marie R. Diaz, Personnel Specialist  
University of Guam  
Personnel Office  
UOG Station  
Mangilao, Guam, M.I.  96913  

Dear Ms. Diaz:

Because of your position and title, the nature of your job, and that you have served and done an outstanding job as my proxy for my master's degree examination for the University of Oregon, Dr. John P. Eddy, Professor at University of North Texas, committee members and I have selected you to be the proxy of my doctoral research entitled "Faculty and Administrators' Job Preferential and Job Satisfaction Factors at the University of Guam."

Your role would include instruction and distribution and possible follow-ups, and collection of the questionnaires. The details will be sent to you upon your acceptance of this request. Your cooperation in this matter will be greatly appreciated. Please respond in writing at the earliest possible time indicating your acceptance.

Si yuus masse,

Bob Santos

cc: Dr. Wilfred P. Leon Guerrero, President  
    Dr. John Rider, Chairman of the Faculty Council
February 2, 1990

Bob Santos
317 Egan
Denton, Texas 76201

Dear Mr. Santos:

I am honored to have been selected to be the proxy of your doctorate research and hereby accept the appointment. However, because of an impending knee surgery, I would be most appreciative if my immediate supervisor, Mr. Alfred G. Blaz, Director of Operations & Support Services be appointed as an Alternate. I am sure that Mr. Blaz would be elated. As a matter of fact, he is most willing to assist.

Mr. Blaz is directly responsible for the administration of the UOG Personnel Office and is knowledgeable in all academic and personnel matters. He would be an excellent choice.

Please let me know if this arrangement is approved.

Sincerely yours,

MARIE R. DIAZ
Personnel Specialist IV

cc: President
Dr. John Rider, Chairman of the Faculty Council
Mr. Alfred G. Blaz, Director of Operations & Support Services
Proxy's Distribution and Collection Instructions

The following procedural categories will help the efficiency of the distribution and collection of questionnaires: (a) coding the questionnaires for determination of nonrespondents, (b) definition of terms, (c) distribution instructions, (d) follow-up instructions, and (e) collection instructions.

Coding

A list must be acquired that accounts for all full-time faculty members and all full-time and part-time administrators. For follow-up purposes, all questionnaires must be coded to provide the researcher and proxy means of identifying who has not responded.

Definition of Terms

For the purpose of clarification, the following terms are defined.

1. **Administrators**—This term refers to all full-time and part-time administrators to also include department directors, deans, and chairpersons.

2. **Faculty Members**—This term refers to all full-time instructors, assistant professors, associate professors, and full professors, not including administrators.

Distribution Instructions

Questionnaires come in two colors, ivory for the administrators and white for the faculty members. Distribute the questionnaires to the appropriate participant category with the appropriate respondent and nonrespondent coding. There are 150
ivory and 400 white questionnaires for the purpose of distributions and follow-ups.

Follow-up Instructions

To ensure high return rate, follow-ups are necessary. The schedule of follow-ups is as follows:
1. Send a reminder memo after one week of first distribution of questionnaires.
2. After two weeks of the first distribution, send a memo, along with questionnaires, to nonrespondents stressing the importance of the questionnaire being returned.
3. One week after the second memo another memo is sent out to nonrespondents.
4. After two weeks of the second distribution of questionnaires, send another memo, along with questionnaires, to nonrespondents.
5. One week after the second distribution of questionnaires and memo send a reminder memo to nonrespondents.
6. After two weeks of the second distribution of questionnaires, send another memo, along with questionnaires, to nonrespondents.
7. One week after the third distribution of questionnaires send a memo to nonrespondents.
8. After two weeks of the third distribution of questionnaires, the nonrespondents are to be called.

Collection Instructions

All questionnaires must be returned to the proxy who will sort by color and enclose the completed questionnaires in sealed Manila envelopes. These sealed envelopes will be picked up by the investigator.
MEMORANDUM

TO:

FRCM: Acting Dean
CBPA

SUBJECT: Participation in Survey

The President has authorized Mr. Robert Santos, an ABD candidate, to circulate the enclosed survey in order that he may be able to complete his doctoral research entitled "Faculty and Administrators Job Preferential and Job Satisfaction Factors at the University of Guam".

Your cooperation and effort in assisting Mr. Santos obtain the required data will be appreciated. Please return the completed form to the Personnel office on or before Friday April 6, 1990.

CAROL J. COZAN
Acting Dean

CJC/cn

ATTACHMENT
APPENDIX E

CHI-SQUARE TABLES FOR HYPOTHESES
Table 19

Derivations of an Interval Scale from Normal Deviates among Administrators'

Preferential Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<tbody>
<tr>
<td>Advancement</td>
<td>.000</td>
<td>-.319</td>
<td>-.673</td>
<td>-.774</td>
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<td>.237</td>
<td>-.319</td>
<td>-.673</td>
<td>-.157</td>
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<td>.000</td>
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<td>-.319</td>
<td>-.774</td>
<td>.774</td>
<td>-.078</td>
<td>-.578</td>
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<td>.000</td>
<td>.774</td>
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<td>.402</td>
<td>.578</td>
<td>.157</td>
<td>1.139</td>
</tr>
<tr>
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<td>-.774</td>
<td>.000</td>
<td>-.402</td>
<td>.402</td>
<td>.774</td>
<td>-.774</td>
<td>1.139</td>
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<tr>
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<td>.774</td>
<td>.157</td>
<td>.402</td>
<td>.000</td>
<td>1.268</td>
<td>.673</td>
<td>.078</td>
<td>.774</td>
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<td>-.774</td>
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<td>-1.139</td>
<td>-.774</td>
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<td>.000</td>
<td>-.884</td>
<td>.000</td>
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<td>-.402</td>
<td>-.319</td>
<td>.578</td>
<td>.578</td>
<td>-.402</td>
<td>.578</td>
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<td>-1.860</td>
<td>-5.714</td>
<td>5.792</td>
<td>2.020</td>
<td>-4.702</td>
<td>4.275</td>
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<tr>
<td>Average</td>
<td>.435</td>
<td>.127</td>
<td>-.492</td>
<td>-.186</td>
<td>-.571</td>
<td>.579</td>
<td>.202</td>
<td>-.470</td>
<td>.428</td>
</tr>
<tr>
<td>Items</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>1</td>
</tr>
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<td>Final Scale</td>
<td>.000</td>
<td>.080</td>
<td>.101</td>
<td>.385</td>
<td>.520</td>
<td>.699</td>
<td>.773</td>
<td>.999</td>
<td>1.006</td>
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</table>
### Table 20

**Derivations of an Interval Scale from Normal Deviates among Faculty Members' Satisfaction Factors**

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Wages</td>
<td>.000</td>
<td>-0.534</td>
<td>.534</td>
<td>-0.849</td>
<td>-0.849</td>
<td>-0.380</td>
<td>-0.322</td>
<td>-0.380</td>
<td>-0.470</td>
</tr>
<tr>
<td>Job Security</td>
<td>0.534</td>
<td>0.000</td>
<td>.701</td>
<td>-0.470</td>
<td>0.014</td>
<td>0.014</td>
<td>-0.236</td>
<td>0.041</td>
<td>0.380</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>-0.534</td>
<td>-0.701</td>
<td>.000</td>
<td>-1.202</td>
<td>-1.020</td>
<td>-1.247</td>
<td>-0.886</td>
<td>-0.811</td>
<td>-0.292</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>0.849</td>
<td>0.470</td>
<td>1.202</td>
<td>0.000</td>
<td>0.701</td>
<td>0.565</td>
<td>0.632</td>
<td>1.202</td>
<td>0.972</td>
</tr>
<tr>
<td>In On Things</td>
<td>0.849</td>
<td>-0.014</td>
<td>1.020</td>
<td>-0.701</td>
<td>0.000</td>
<td>0.565</td>
<td>0.014</td>
<td>0.565</td>
<td>0.440</td>
</tr>
<tr>
<td>Working Conditions</td>
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<td>-0.014</td>
<td>1.247</td>
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<td>-0.565</td>
<td>0.000</td>
<td>-0.440</td>
<td>0.069</td>
<td>0.322</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>0.322</td>
<td>0.236</td>
<td>0.886</td>
<td>-0.632</td>
<td>-0.014</td>
<td>0.440</td>
<td>0.000</td>
<td>0.380</td>
<td>0.665</td>
</tr>
<tr>
<td>Appreciation</td>
<td>0.380</td>
<td>-0.041</td>
<td>0.811</td>
<td>-1.202</td>
<td>-0.565</td>
<td>-0.069</td>
<td>-0.380</td>
<td>0.000</td>
<td>0.041</td>
</tr>
<tr>
<td>Promotion</td>
<td>0.470</td>
<td>-0.380</td>
<td>0.292</td>
<td>-0.972</td>
<td>-0.440</td>
<td>-0.322</td>
<td>-0.665</td>
<td>-0.041</td>
<td>0.000</td>
</tr>
<tr>
<td>Understanding</td>
<td>0.736</td>
<td>0.264</td>
<td>1.247</td>
<td>-0.411</td>
<td>0.096</td>
<td>0.440</td>
<td>0.380</td>
<td>0.886</td>
<td>0.771</td>
</tr>
</tbody>
</table>

Sum: 3.985 -0.712 7.939 -7.002 -2.641 .007 -1.904 1.911 2.829

Average: 0.399 -0.071 0.794 -0.700 -0.264 .001 -0.190 .191 .283

Items: 4 10 5 7 2 6 8 9 1 3

Final Scale: 0.000 .259 .436 .510 .629 .701 .891 .983 1.099 1.494
Table 21
Derivations of an Interval Scale from Normal Deviates among Administrators'
Satisfaction Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Wages</td>
<td>.000</td>
<td>-.487</td>
<td>-.487</td>
<td>-1.010</td>
<td>-0.884</td>
<td>-0.884</td>
<td>-0.884</td>
<td>-0.578</td>
<td>-0.884</td>
</tr>
<tr>
<td>Job Security</td>
<td>.487</td>
<td>.000</td>
<td>-.078</td>
<td>-1.268</td>
<td>-0.319</td>
<td>-0.578</td>
<td>-0.774</td>
<td>-0.402</td>
<td>.237</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>.487</td>
<td>.078</td>
<td>.000</td>
<td>-1.268</td>
<td>-0.884</td>
<td>-0.319</td>
<td>-0.673</td>
<td>-0.578</td>
<td>.402</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>1.010</td>
<td>1.268</td>
<td>1.268</td>
<td>.000</td>
<td>.578</td>
<td>.774</td>
<td>.402</td>
<td>1.139</td>
<td>5.660</td>
</tr>
<tr>
<td>In On Things</td>
<td>.884</td>
<td>.319</td>
<td>.884</td>
<td>-.578</td>
<td>.000</td>
<td>.319</td>
<td>-.319</td>
<td>.157</td>
<td>.578</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>.884</td>
<td>.578</td>
<td>.319</td>
<td>-.774</td>
<td>-.319</td>
<td>.000</td>
<td>-.487</td>
<td>-1.157</td>
<td>1.010</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>.884</td>
<td>.774</td>
<td>.673</td>
<td>-.402</td>
<td>.319</td>
<td>.487</td>
<td>.000</td>
<td>.578</td>
<td>1.139</td>
</tr>
<tr>
<td>Appreciation</td>
<td>.884</td>
<td>.402</td>
<td>.578</td>
<td>-1.139</td>
<td>-.157</td>
<td>-.157</td>
<td>-.578</td>
<td>.000</td>
<td>.319</td>
</tr>
<tr>
<td>Promotion</td>
<td>.578</td>
<td>-.237</td>
<td>-.402</td>
<td>-5.660</td>
<td>-.578</td>
<td>-1.010</td>
<td>-1.139</td>
<td>-.319</td>
<td>.000</td>
</tr>
<tr>
<td>Understanding</td>
<td>.884</td>
<td>1.010</td>
<td>.884</td>
<td>-.402</td>
<td>.578</td>
<td>.673</td>
<td>.237</td>
<td>1.010</td>
<td>1.775</td>
</tr>
</tbody>
</table>


Average                      | .698 | .371 | .364 | -1.250 | -1.167| -.038 | -.421 | .054  | 1.054|

Items                        | 4    | 10   | 7    | 5     | 6     | 8     | 3     | 2     | 1     |

Final Scale                  | .000 | .585 | .829 | 1.084 | 1.212 | 1.305 | 1.614 | 1.621 | 1.948 | 2.304|
Table 22

Derivations of an Interval Scale from Normal Deviates among Male Faculty Members'

Preferential Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement</td>
<td>0.000</td>
<td>-0.236</td>
<td>-0.369</td>
<td>-0.369</td>
<td>-0.769</td>
<td>0.106</td>
<td>-0.021</td>
<td>-0.660</td>
<td>0.558</td>
</tr>
<tr>
<td>Benefits</td>
<td>0.236</td>
<td>0.000</td>
<td>-0.369</td>
<td>-0.064</td>
<td>-0.510</td>
<td>0.236</td>
<td>-0.149</td>
<td>-0.324</td>
<td>0.955</td>
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<tr>
<td>Company</td>
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<td>0.369</td>
<td>0.000</td>
<td>0.558</td>
<td>-0.279</td>
<td>0.149</td>
<td>0.279</td>
<td>-0.064</td>
<td>1.235</td>
</tr>
<tr>
<td>Co-Workers</td>
<td>0.369</td>
<td>0.064</td>
<td>-0.558</td>
<td>0.000</td>
<td>-0.510</td>
<td>0.415</td>
<td>-0.021</td>
<td>-0.510</td>
<td>1.235</td>
</tr>
<tr>
<td>Hours</td>
<td>0.769</td>
<td>0.510</td>
<td>0.279</td>
<td>0.510</td>
<td>0.000</td>
<td>0.888</td>
<td>0.660</td>
<td>0.279</td>
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<td>Pay</td>
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<td>-0.149</td>
<td>-0.415</td>
<td>-0.888</td>
<td>0.000</td>
<td>-0.149</td>
<td>-0.769</td>
<td>-0.660</td>
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<td>-0.021</td>
<td>-0.660</td>
<td>0.149</td>
<td>0.000</td>
<td>-0.106</td>
<td>0.888</td>
</tr>
<tr>
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<td>0.064</td>
<td>0.510</td>
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<td>0.769</td>
<td>0.106</td>
<td>0.000</td>
<td>1.165</td>
</tr>
<tr>
<td>Type of Work</td>
<td>-0.558</td>
<td>-0.955</td>
<td>-1.235</td>
<td>-1.235</td>
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<td>-0.660</td>
<td>-0.888</td>
<td>-1.165</td>
<td>0.000</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>0.064</td>
<td>0.064</td>
<td>-0.415</td>
<td>0.279</td>
<td>-0.660</td>
<td>-0.021</td>
<td>0.236</td>
<td>-0.609</td>
<td>0.955</td>
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</table>

Sum: 1.823 0.053 -3.031 -0.205 -5.720 2.031 0.053 -3.929 8.817

Average: 0.182 0.005 -0.303 -0.021 -0.572 0.203 0.005 -0.393 0.882

Items: 5 8 3 4 7 2 10 1 6 9

Final Scale: 0.000 0.179 0.269 0.552 0.577 0.577 0.583 0.754 0.775 1.454
Table 23

Derivations of an Interval Scale from Normal Deviates among Female Faculty Members’
 Preferential Factors

<table>
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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement</td>
<td>.000</td>
<td>.000</td>
<td>-.319</td>
<td>-.078</td>
<td>-.402</td>
<td>.157</td>
<td>-.237</td>
<td>-.402</td>
<td>.673</td>
</tr>
<tr>
<td>Benefits</td>
<td>.000</td>
<td>.000</td>
<td>-.774</td>
<td>-.078</td>
<td>-.078</td>
<td>.157</td>
<td>-.078</td>
<td>-.673</td>
<td>1.010</td>
</tr>
<tr>
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<td>.319</td>
<td>.774</td>
<td>.000</td>
<td>.673</td>
<td>.319</td>
<td>.078</td>
<td>.078</td>
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<td>-.078</td>
<td>-.673</td>
<td>.000</td>
<td>-.319</td>
<td>.157</td>
<td>-.157</td>
<td>-.402</td>
<td>.884</td>
</tr>
<tr>
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<td>.078</td>
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<td>.319</td>
<td>.000</td>
<td>.487</td>
<td>.157</td>
<td>-.237</td>
<td>.884</td>
</tr>
<tr>
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<td>-.157</td>
<td>-.078</td>
<td>-.157</td>
<td>-.402</td>
<td>.000</td>
<td>-.157</td>
<td>-.884</td>
<td>.673</td>
</tr>
<tr>
<td>Security</td>
<td>.237</td>
<td>.078</td>
<td>-.078</td>
<td>.157</td>
<td>-.157</td>
<td>.157</td>
<td>.000</td>
<td>.000</td>
<td>.884</td>
</tr>
<tr>
<td>Supervisor</td>
<td>.402</td>
<td>.673</td>
<td>-.402</td>
<td>.402</td>
<td>.237</td>
<td>.884</td>
<td>.000</td>
<td>.000</td>
<td>1.139</td>
</tr>
<tr>
<td>Type of Work</td>
<td>-.673</td>
<td>-1.010</td>
<td>-1.533</td>
<td>-.884</td>
<td>-.884</td>
<td>-.673</td>
<td>-.884</td>
<td>-1.139</td>
<td>.000</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>-.157</td>
<td>-.078</td>
<td>-.237</td>
<td>.487</td>
<td>.157</td>
<td>.402</td>
<td>.000</td>
<td>-.237</td>
<td>1.533</td>
</tr>
</tbody>
</table>

| Average              | .045| .028| -.441| .100| -.161| .181| -.128| -.357| .921|
| Items                | 3   | 8   | 10   | 5   | 7   | 2   | 1   | 4   | 6   |
| Final Scale          | .000| .084| .254| .280| .314| .469| .486| .541| .622| 1.363|
Table 24

Derivations of an Interval Scale from Normal Deviates among Male Faculty Members'

Satisfaction Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Wages</td>
<td>.000</td>
<td>-510</td>
<td>.558</td>
<td>-.888</td>
<td>-.769</td>
<td>-.279</td>
<td>-.415</td>
<td>-.369</td>
<td>-.415</td>
</tr>
<tr>
<td>Job Security</td>
<td>.510</td>
<td>.000</td>
<td>.609</td>
<td>-.609</td>
<td>-.192</td>
<td>.021</td>
<td>-.369</td>
<td>-.021</td>
<td>.461</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>-.558</td>
<td>-.609</td>
<td>.000</td>
<td>-1.305</td>
<td>-.955</td>
<td>-1.235</td>
<td>-1.025</td>
<td>-.620</td>
<td>-.279</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>.888</td>
<td>.609</td>
<td>1.305</td>
<td>.000</td>
<td>.955</td>
<td>.660</td>
<td>.510</td>
<td>1.375</td>
<td>.888</td>
</tr>
<tr>
<td>In On Things</td>
<td>.769</td>
<td>.192</td>
<td>.955</td>
<td>-.955</td>
<td>.000</td>
<td>.415</td>
<td>-.106</td>
<td>.510</td>
<td>.415</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>.279</td>
<td>-.021</td>
<td>1.235</td>
<td>-.660</td>
<td>-.415</td>
<td>.000</td>
<td>-.415</td>
<td>.106</td>
<td>.324</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>.415</td>
<td>.369</td>
<td>1.025</td>
<td>-.510</td>
<td>.106</td>
<td>.415</td>
<td>.000</td>
<td>.415</td>
<td>.829</td>
</tr>
<tr>
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<td>-.021</td>
<td>.660</td>
<td>-1.375</td>
<td>-.510</td>
<td>-.106</td>
<td>-.415</td>
<td>.000</td>
<td>.106</td>
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<td>.279</td>
<td>-.888</td>
<td>-.415</td>
<td>-3.24</td>
<td>-.829</td>
<td>-.106</td>
<td>.000</td>
</tr>
<tr>
<td>Understanding</td>
<td>.609</td>
<td>.236</td>
<td>1.235</td>
<td>-.415</td>
<td>.149</td>
<td>.510</td>
<td>.192</td>
<td>.955</td>
<td>.769</td>
</tr>
</tbody>
</table>

Sum
| 3.696| -.175| 7.863| -7.605| -2.046| .077| -2.873| 2.205| 3.099 |

Average
| .370| -.017| .786| -.761| -.205| .008| -.287| .221| .310 |

Items
| 4   | 10  | 7   | 5   | 2   | 6   | 8   | 9   | 1   |

Final Scale
| .800| .337| .473| .556| .743| .768| .981| 1.070| 1.130| 1.547 |
Table 25

Derivations of an Interval Scale from Normal Deviates among Female Faculty Members' Satisfaction Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Wages</td>
<td>.000</td>
<td>-.578</td>
<td>.487</td>
<td>-.774</td>
<td>-1.010</td>
<td>-.578</td>
<td>-.157</td>
<td>-.402</td>
<td>-.578</td>
</tr>
<tr>
<td>Job Security</td>
<td>.578</td>
<td>.000</td>
<td>.884</td>
<td>-.237</td>
<td>.402</td>
<td>.000</td>
<td>-.000</td>
<td>.157</td>
<td>.237</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>-.487</td>
<td>-.884</td>
<td>.000</td>
<td>-1.010</td>
<td>-1.139</td>
<td>-1.268</td>
<td>-.673</td>
<td>-1.139</td>
<td>-.319</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>.774</td>
<td>.237</td>
<td>1.010</td>
<td>.000</td>
<td>.319</td>
<td>.402</td>
<td>.884</td>
<td>.000</td>
<td>1.139</td>
</tr>
<tr>
<td>In On Things</td>
<td>1.010</td>
<td>-.402</td>
<td>1.139</td>
<td>-.319</td>
<td>.000</td>
<td>.884</td>
<td>.237</td>
<td>.673</td>
<td>.487</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>.578</td>
<td>.000</td>
<td>1.268</td>
<td>-.402</td>
<td>-.884</td>
<td>.000</td>
<td>-.487</td>
<td>.000</td>
<td>.319</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>.157</td>
<td>.000</td>
<td>.673</td>
<td>-.884</td>
<td>-.237</td>
<td>.487</td>
<td>.000</td>
<td>.319</td>
<td>.402</td>
</tr>
<tr>
<td>Appreciation</td>
<td>.402</td>
<td>-.157</td>
<td>1.139</td>
<td>-.884</td>
<td>-.673</td>
<td>.000</td>
<td>-.319</td>
<td>.000</td>
<td>-.078</td>
</tr>
<tr>
<td>Promotion</td>
<td>.578</td>
<td>-.237</td>
<td>.319</td>
<td>-1.139</td>
<td>-.487</td>
<td>-.319</td>
<td>-.402</td>
<td>.078</td>
<td>.000</td>
</tr>
<tr>
<td>Understanding</td>
<td>1.010</td>
<td>.319</td>
<td>1.268</td>
<td>-.402</td>
<td>.000</td>
<td>.319</td>
<td>.774</td>
<td>.774</td>
<td>.774</td>
</tr>
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<td>Sum</td>
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<td>8.187</td>
<td>-6.052</td>
<td>-3.709</td>
<td>-0.072</td>
<td>-0.142</td>
<td>1.344</td>
<td>2.384</td>
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<tr>
<td>Average</td>
<td>.460</td>
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<td>.819</td>
<td>-.605</td>
<td>-.371</td>
<td>-.007</td>
<td>-.014</td>
<td>.134</td>
<td>.238</td>
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<td>5</td>
<td>2</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Final Scale</td>
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<td>.234</td>
<td>.435</td>
<td>.591</td>
<td>.598</td>
<td>.740</td>
<td>.844</td>
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</table>

185
Table 26

Chi-square Analysis for Job Preferential Factors of Faculty Members and Administrators

<table>
<thead>
<tr>
<th>Factors</th>
<th>Administrators</th>
<th>Faculty Members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observed</td>
<td>Expected</td>
</tr>
<tr>
<td>Advancement</td>
<td>194</td>
<td>169.11</td>
</tr>
<tr>
<td>Benefits</td>
<td>159</td>
<td>149.85</td>
</tr>
<tr>
<td>Company</td>
<td>87</td>
<td>99.38</td>
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<tr>
<td>Co-workers</td>
<td>123</td>
<td>141.79</td>
</tr>
<tr>
<td>Hours</td>
<td>80</td>
<td>90.54</td>
</tr>
<tr>
<td>Pay</td>
<td>210</td>
<td>178.47</td>
</tr>
<tr>
<td>Security</td>
<td>168</td>
<td>146.99</td>
</tr>
<tr>
<td>Supervisor</td>
<td>90</td>
<td>97.82</td>
</tr>
<tr>
<td>Type of Work</td>
<td>191</td>
<td>227.38</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>138</td>
<td>138.67</td>
</tr>
</tbody>
</table>

$x^2 = 33.35$, $df = 9$, $p$ less than $.05$
Table 27

Chi-square Analysis for Job Satisfaction Factors of Faculty Members and Administrators

<table>
<thead>
<tr>
<th>Factors</th>
<th>Administrators</th>
<th>Faculty Members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 1440</td>
<td>N = 4095</td>
</tr>
<tr>
<td>Good Wages</td>
<td>Observed 224</td>
<td>Expected 199.80</td>
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<tr>
<td></td>
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<td>544</td>
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<td></td>
<td></td>
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<td>Observed 185</td>
<td>Expected 148.55</td>
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<tr>
<td></td>
<td></td>
<td>386</td>
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<tr>
<td></td>
<td></td>
<td>422.45</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>Observed 184</td>
<td>Expected 218.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>657</td>
</tr>
<tr>
<td></td>
<td></td>
<td>622.20</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>Observed 53</td>
<td>Expected 61.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>185</td>
</tr>
<tr>
<td></td>
<td></td>
<td>176.08</td>
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<tr>
<td>In On Things</td>
<td>Observed 125</td>
<td>Expected 116.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>323</td>
</tr>
<tr>
<td></td>
<td></td>
<td>331.45</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>Observed 141</td>
<td>Expected 144.91</td>
</tr>
<tr>
<td></td>
<td></td>
<td>416</td>
</tr>
<tr>
<td></td>
<td></td>
<td>412.09</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>Observed 96</td>
<td>Expected 114.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>345</td>
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<tr>
<td></td>
<td></td>
<td>326.27</td>
</tr>
<tr>
<td>Appreciation</td>
<td>Observed 148</td>
<td>Expected 160.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>469</td>
</tr>
<tr>
<td></td>
<td></td>
<td>456.48</td>
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<tr>
<td>Promotion</td>
<td>Observed 210</td>
<td>Expected 185.50</td>
</tr>
<tr>
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<td></td>
<td>503</td>
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<td></td>
<td></td>
<td>527.50</td>
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<td>Understanding</td>
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<td>Expected 88.72</td>
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<tr>
<td></td>
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<td>267</td>
</tr>
<tr>
<td></td>
<td></td>
<td>252.28</td>
</tr>
</tbody>
</table>

\[ x^2 = 39.53, \text{ df } = 9, \text{ p less than } 0.05 \]
Table 28
Chi-square Analysis for Job Preferential Factors of Male and Female Faculty Members

<table>
<thead>
<tr>
<th>Factors</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observed</td>
<td>Expected</td>
</tr>
<tr>
<td>Advancement</td>
<td>306</td>
<td>295.65</td>
</tr>
<tr>
<td>Benefits</td>
<td>269</td>
<td>270.36</td>
</tr>
<tr>
<td>Company</td>
<td>201</td>
<td>191.91</td>
</tr>
<tr>
<td>Co-workers</td>
<td>265</td>
<td>273.60</td>
</tr>
<tr>
<td>Hours</td>
<td>143</td>
<td>173.76</td>
</tr>
<tr>
<td>Pay</td>
<td>310</td>
<td>308.62</td>
</tr>
<tr>
<td>Security</td>
<td>268</td>
<td>257.40</td>
</tr>
<tr>
<td>Supervisor</td>
<td>182</td>
<td>184.78</td>
</tr>
<tr>
<td>Type of Work</td>
<td>442</td>
<td>442.82</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>269</td>
<td>256.10</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 22.12, \text{ df} = 9, \ p \text{ less than } .05 \]
Table 29

Chi-square Analysis for Job Satisfaction Factors of Male and Female Faculty Members

<table>
<thead>
<tr>
<th>Factors</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observed</td>
<td>Expected</td>
</tr>
<tr>
<td>Good Wages</td>
<td>347</td>
<td>352.49</td>
</tr>
<tr>
<td>Job Security</td>
<td>262</td>
<td>250.30</td>
</tr>
<tr>
<td>Interesting Work</td>
<td>424</td>
<td>425.58</td>
</tr>
<tr>
<td>Tactful Disciplining</td>
<td>110</td>
<td>120.30</td>
</tr>
<tr>
<td>In On Things</td>
<td>220</td>
<td>209.55</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>271</td>
<td>269.70</td>
</tr>
<tr>
<td>Management Loyalty</td>
<td>204</td>
<td>223.78</td>
</tr>
<tr>
<td>Appreciation</td>
<td>308</td>
<td>303.98</td>
</tr>
<tr>
<td>Promotion</td>
<td>332</td>
<td>325.97</td>
</tr>
<tr>
<td>Understanding</td>
<td>177</td>
<td>173.33</td>
</tr>
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</table>

$X^2 = 11.35, df = 9$, Non significant
Table 31  
Post Hoc Analysis of Job Preferential Factors of Administrators (n = 32)

<table>
<thead>
<tr>
<th>Pairs</th>
<th>Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement - Company</td>
<td>3.53</td>
<td>.05</td>
</tr>
<tr>
<td>Advancement - Hours</td>
<td>3.73</td>
<td>.05</td>
</tr>
<tr>
<td>Advancement - Supervisor</td>
<td>3.42</td>
<td>.05</td>
</tr>
<tr>
<td>Company - Pay</td>
<td>3.97</td>
<td>.05</td>
</tr>
<tr>
<td>Company - Type of Work</td>
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<td>.05</td>
</tr>
<tr>
<td>Hours - Pay</td>
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</tr>
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<td>Hours - Type of Work</td>
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<td>.05</td>
</tr>
<tr>
<td>Pay - Supervisor</td>
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</tr>
<tr>
<td>Supervisor - Type of Work</td>
<td>3.42</td>
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</tr>
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</table>
Table 32
Post Hoc Analysis of Job Satisfaction Factors of Faculty Members (n = 91)

<table>
<thead>
<tr>
<th>Pairs</th>
<th>Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interesting Work - Tactful Disciplining</td>
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</tr>
<tr>
<td>Interesting Work - In On Things</td>
<td>3.74</td>
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</tr>
<tr>
<td>Interesting Work - Working Conditions</td>
<td>2.73</td>
<td>.05</td>
</tr>
<tr>
<td>Interesting Work - Management Loyalty</td>
<td>3.47</td>
<td>.05</td>
</tr>
<tr>
<td>Interesting Work - Appreciation</td>
<td>1.98</td>
<td>.05</td>
</tr>
<tr>
<td>Tactful Disciplining - Working Conditions</td>
<td>2.67</td>
<td>.05</td>
</tr>
<tr>
<td>Tactful Disciplining - Management Loyalty</td>
<td>1.93</td>
<td>.05</td>
</tr>
<tr>
<td>Tactful Disciplining - Appreciation</td>
<td>3.41</td>
<td>.05</td>
</tr>
<tr>
<td>Tactful Disciplining - Promotion</td>
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<td>.05</td>
</tr>
<tr>
<td>In On Things - Promotion</td>
<td>2.12</td>
<td>.05</td>
</tr>
<tr>
<td>Appreciation - Understanding</td>
<td>2.46</td>
<td>.05</td>
</tr>
<tr>
<td>Promotion - Understanding</td>
<td>2.82</td>
<td>.05</td>
</tr>
</tbody>
</table>
Table 33

Post Hoc Analysis of Job Satisfaction Factors of Administrators (n = 32)

<table>
<thead>
<tr>
<th>Pairs</th>
<th>Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Wages - Tactful Disciplining</td>
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<tr>
<td>Good Wages - Management Loyalty</td>
<td>4.09</td>
<td>.05</td>
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<tr>
<td>Good Wages - Understanding</td>
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<tr>
<td>Job Security - Tactful Disciplining</td>
<td>4.23</td>
<td>.05</td>
</tr>
<tr>
<td>Job Security - Understanding</td>
<td>3.67</td>
<td>.05</td>
</tr>
<tr>
<td>Interesting Work - Tactful Disciplining</td>
<td>4.23</td>
<td>.05</td>
</tr>
<tr>
<td>Interesting Work - Understanding</td>
<td>3.67</td>
<td>.05</td>
</tr>
<tr>
<td>Tactful Disciplining - Promotion</td>
<td>5.14</td>
<td>.05</td>
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<td>Management Loyalty - Promotion</td>
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<td>.05</td>
</tr>
<tr>
<td>Promotion - Understanding</td>
<td>4.58</td>
<td>.05</td>
</tr>
</tbody>
</table>
Table 34

Post Hoc Analysis of Job Preference Factors of Male Faculty Members (n = 59)

<table>
<thead>
<tr>
<th>Pairs</th>
<th>Value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement - Hours</td>
<td>2.92</td>
<td>.05</td>
</tr>
<tr>
<td>Advancement - Supervisor</td>
<td>2.31</td>
<td>.05</td>
</tr>
<tr>
<td>Advancement - Type of Work</td>
<td>2.47</td>
<td>.05</td>
</tr>
<tr>
<td>Benefits - Hours</td>
<td>2.31</td>
<td>.05</td>
</tr>
<tr>
<td>Benefits - Type of Work</td>
<td>3.08</td>
<td>.05</td>
</tr>
<tr>
<td>Company - Type of Work</td>
<td>4.40</td>
<td>.05</td>
</tr>
<tr>
<td>Co-workers - Type of Work</td>
<td>3.30</td>
<td>.05</td>
</tr>
<tr>
<td>Hours - Pay</td>
<td>2.98</td>
<td>.05</td>
</tr>
<tr>
<td>Hours - Security</td>
<td>2.31</td>
<td>.05</td>
</tr>
<tr>
<td>Hours - Type of Work</td>
<td>5.39</td>
<td>.05</td>
</tr>
<tr>
<td>Pay - Supervisor</td>
<td>2.37</td>
<td>.05</td>
</tr>
<tr>
<td>Pay - Type of Work</td>
<td>2.41</td>
<td>.05</td>
</tr>
<tr>
<td>Security - Type of Work</td>
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<td>.05</td>
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<tr>
<td>Supervisor - Type of Work</td>
<td>4.78</td>
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</tr>
<tr>
<td>Type of Work - Working Conditions</td>
<td>3.21</td>
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</tr>
</tbody>
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Table 35
Post Hoc Analysis of Job Preference Factors of Female Faculty Members (n = 32)

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Company - Type of Work</td>
<td>4.77</td>
<td>.05</td>
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<tr>
<td>Hours - Type of Work</td>
<td>3.80</td>
<td>.05</td>
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<td>Security - Type of Work</td>
<td>3.64</td>
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<tr>
<td>Supervisor - Type of Work</td>
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<tr>
<td>Type of Work - Working Conditions</td>
<td>3.73</td>
<td>.05</td>
</tr>
</tbody>
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