



Faculty job satisfaction as a function of participative decision making in selected four-year colleges in the Northwest United States
by Gregory Lee Hergott

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:

The purpose of this study was to examine the relationships of perceived participation in decision making and faculty rank to job satisfaction of faculty members at 10 private institutions in the Northwest. Research was conducted in the spring of 1990. The problem was investigated by utilizing two survey instruments and four categories of faculty rank. The first survey was the Management Communication Style Instrument; it places the management styles of tell, sell, consult, and join on an 18-point continuum ranging from 10-28. The second survey instrument was the Job Description Index; this tool utilizes 72 responses to examine five components of job satisfaction: supervision, work, pay, promotion, and co-workers. The total sample for this analysis included 574 faculty members. There were 236 usable responses for a return rate of 41%.

The major findings of this study were: (1) management communication styles of consult and join were more highly related than a style of tell when examining job satisfaction with work; (2) the styles of consult and join were more highly related than the styles of tell and sell when examining job satisfaction with supervision; (3) when examining faculty rank and job satisfaction with pay, full professors were found to be more satisfied with their pay than the other ranks of assistant, associate, and other; (4) faculty were more satisfied with their pay if a management communication style of join was utilized; (5) faculty were more satisfied with the promotion process if they were a full professor; and (6) faculty were more satisfied with their co-workers if the management communication styles of join or consult were utilized. It was confirmed that faculty rank and management communication style can be important factors when examining job satisfaction. This research has confirmed these findings statistically through the analysis as well as with the reported review of literature.

Recommendations for further study include: (1) utilize additional variables to analyze job satisfaction in a higher education environment; (2) analyze institutions individually and perform follow-up studies to determine how and why these institutions differ in job satisfaction (case analysis); (3) compare faculty job satisfaction at private institutions to that of public institutions to determine where and why differences exist; (4) conduct further studies on situational leadership to determine if administrators utilize multiple styles, including "when" and "why"; and (5) conduct further studies on faculty rank and promotion process and determine whether these procedures are consistent among institutions.

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OF PARTICIPATIVE DECISION MAKING IN
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THE NORTHWEST UNITED STATES

by

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APPROVAL

of a thesis submitted by

Gregory Lee Hergott

This thesis has been read by each member of the graduate committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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ABSTRACT

The purpose of this study was to examine the relationships of perceived participation in decision making and faculty rank to job satisfaction of faculty members at 10 private institutions in the Northwest. Research was conducted in the spring of 1990. The problem was investigated by utilizing two survey instruments and four categories of faculty rank. The first survey was the Management Communication Style Instrument; it places the management styles of *tell*, *sell*, *consult*, and *join* on an 18-point continuum ranging from 10-28. The second survey instrument was the Job Description Index; this tool utilizes 72 responses to examine five components of job satisfaction: supervision, work, pay, promotion, and co-workers. The total sample for this analysis included 574 faculty members. There were 236 usable responses for a return rate of 41%.

The major findings of this study were: (1) management communication styles of *consult* and *join* were more highly related than a style of *tell* when examining job satisfaction with work; (2) the styles of *consult* and *join* were more highly related than the styles of *tell* and *sell* when examining job satisfaction with supervision; (3) when examining faculty rank and job satisfaction with pay, full professors were found to be more satisfied with their pay than the other ranks of assistant, associate, and other; (4) faculty were more satisfied with their pay if a management communication style of *join* was utilized; (5) faculty were more satisfied with the promotion process if they were a full professor; and (6) faculty were more satisfied with their co-workers if the management communication styles of *join* or *consult* were utilized. It was confirmed that faculty rank and management communication style can be important factors when examining job satisfaction. This research has confirmed these findings statistically through the analysis as well as with the reported review of literature.

Recommendations for further study include: (1) utilize additional variables to analyze job satisfaction in a higher education environment; (2) analyze institutions individually and perform follow-up studies to determine how and why these institutions differ in job satisfaction (case analysis); (3) compare faculty job satisfaction at private institutions to that of public institutions to determine where and why differences exist; (4) conduct further studies on situational leadership to determine if administrators utilize multiple styles, including "when" and "why"; and (5) conduct further studies on faculty rank and promotion process and determine whether these procedures are consistent among institutions.

CHAPTER 1

INTRODUCTION

The economic turmoil of the 1980s has made it increasingly difficult for colleges and universities to retain quality faculty and staff. As we move into the 90s, this spiraling trend would lead one to believe that, at best, education will be fortunate just to maintain its current level of functioning without gaining any ground on the problems that have emerged throughout the 80s. Because of such extraneous variables as government funding cuts, decreased enrollments, and frozen or limited salary increases, faculty job satisfaction has been on the decline (Asmussen, 1983). An additional factor that has contributed to this decline is the lack of faculty participation in the decision making process. Asmussen (1983), in discussing a study conducted through the Institute of Higher Education at Columbia University Teachers College, stated that faculty morale and job satisfaction declined substantially from 1970 to 1980. This study concluded that the drop in morale was attributed to the decline of faculty involvement in their institution's planning and governance. The decline in participation resulted in reduced commitment and support to the institution and also to the

administration. Results of this study indicated a drop in participatory decision making from 64% in 1970 to 44% in 1980 (Asmussen, 1983).

These data appear to allude to the importance and possible connection between participation in campus decision making and job satisfaction. Additional researchers sharing similar views toward the importance of campus-wide participative decision making included Falcione (1974), Falcione et al. (1977), Harrison (1981), Hurt and Teigen (1977), and Rice and Austin (1988). Recent research by Rice and Austin (1988) indicated that higher levels of morale have occurred at small, private colleges, especially in places where the administration encouraged participative decision making. In this present study, participative decision making involves decision making and its implementation, and suggests that these processes be carried out cooperatively between faculty and administration. According to Guskin and Bassis (1985), other key aspects that should be included in promoting job satisfaction at small college campuses in addition to participative decision making include feelings of security about personal futures and feelings of pride in the institution and in one's colleagues.

Rice and Austin (1988) also suggested that there are additional components that influence job satisfaction besides participative decision making. One of these components is a distinctive organizational culture. This culture becomes evident through a clearly stated mission statement based on notions of tradition, rituals, ceremonies, diversity, and coherence that

permeate all the way from the board of trustees to campus security. These people tell the same stories, by referring to the history and tradition of the institution, especially in terms of what it stands for, what it does, and how it does it. Another distinguishing feature that Rice and Austin found to be of significance is for institutions to have organizational momentum. From their research, they found that for colleges to be "on the move," they need to be taking chances and moving ahead with focus and vigor. Another key feature that has been identified in the research is the collaborative environment with which faculty have identified; faculty prefer to be working with each other and with administrators, not competing with one another. Other significant factors contributing to job satisfaction were reward systems (both intrinsically and extrinsically structured), faculty development programs, and community interaction. Community interaction was deemed essential by faculty in that they like to be involved with community functions and respected by local residents (Rice & Austin, 1988).

Although there are many components that can be related to job satisfaction, the present study was concerned with the relationship between participative decision making and job satisfaction. Participative decision making in this study was analyzed by the Management Communication Style Instrument (MCSI) as developed by Richmond and McCroskey (1979). The MCSI utilized scales on a 19-point continuum ranging from 10 (tell), through 16 (sell), through 22 (consult), to 28 (join). Respondents were asked to

circle a point on the scale that represented the style of management of their immediate supervisor.

In addition to participation, this study analyzed job satisfaction. In this analysis the components that were examined were measured by the Job Description Index (JDI) developed by Smith, Kendall, and Hulin in 1969. This multiple-factor instrument measured job satisfaction through an analysis of: (1) supervision, (2) work, (3) pay, (4) promotion, and (5) co-workers. The JDI measure of job satisfaction has been cited in numerous studies as the most reliable and valid instrument to measure job satisfaction (Asmussen, 1983; Howard et al., 1984; Hurt & Teigen, 1977; Richmond & McCroskey, 1979; V.E. Wheelless et al., 1983).

Although participation in the decision making process can be construed as a substantial component of job satisfaction, faculty rank, age, length of service, and pay have also demonstrated positive relationships with job satisfaction (Adams, 1965; Jaques, 1961; Lawler, 1971). Additional variables that can contribute to job satisfaction include, for example, need for fulfillment, achievement, promotion, jobs that are mentally challenging, actual pay that is close to valued pay, verbal recognition, and higher position in the organization (V.E. Wheelless et al., 1983).

While it is of significance for this present study to examine participation and job satisfaction, this research will also examine faculty rank as it relates to job satisfaction. According to Salancik (1979), faculty rank is one of the

most important factors related to an individual's commitment to an organization. As increased rank brings honors, privileges, responsibility, and salary, it usually coincides with increased commitment and involvement and thus an increased desire to participate in the decisions that will guide the institution into the future.

Need for the Study

As we look back at improving faculty morale, participative decision making, and faculty rank, it becomes evident that all of these features relate to employee job satisfaction. Although these components have been analyzed individually and with other variables of job satisfaction, very little research was found that related these components within higher education, and particularly to faculty members at small liberal arts colleges in the northwestern United States. This analysis will thus contribute to the body of research literature pertaining to faculty, faculty rank, participative decision making, and employee job satisfaction.

Statement of Purpose

It was the purpose of this study to examine the relationships of perceived participation in decision making and faculty rank to job satisfaction of faculty members at four-year private institutions in Montana, Oregon, Idaho, Washington, South Dakota, and Nebraska. By comparing and contrasting

the independent variables of faculty rank (assistant professor, associate professor, full professor, and other) and management communication styles (tell, sell, consult, and join) with the five dependent variables of job satisfaction (work, supervision, pay, promotion, and co-workers), this analysis was able to determine how management communication styles and professorial ranks related to job satisfaction. This analysis extends the research of V.E. Wheelless et al. (1983), Salancik (1979), Rice and Austin (1988), and others in reference to job satisfaction, faculty rank, and participative decision making.

CHAPTER 2

REVIEW OF RELEVANT LITERATURE

Introduction

The following review of literature is intended to give the reader a basic understanding of participative decision making and how this managerial style has developed over the past century. This review also addresses job satisfaction and how it relates to participative decision making and faculty rank. In addition, the review addresses the following: (1) the development of management theory over the past century; (2) models of academic governance (bureaucratic, political, and collegial governance), with special emphasis on the collegial approach; and (3) why faculty job satisfaction is important and how it relates to participative decision making and faculty rank.

Development of Management Theory

Management theories discussed in this review include: classical, humanistic, and behavioral (Hoy & Miskel, 1987), also referred to as scientific, person-oriented, and structuralist, respectively (Astin & Scherrei,

1980). These three management theories provide the basis for the theoretical and historical development of the management theory research examined in this study.

The Classical/Scientific Management Theory

As Drucker (1974), Astin and Scherrei (1980), and others have pointed out, the need for organizational theories emerged toward the end of the nineteenth century when banks and railroads were growing and partnerships and companies were developing. As America entered into the World War I and II era, the Defense Department and industry sought to improve the efficiency and productivity of America's defense. Up until this time in history, only minimal school and management training programs were available (Drucker, 1974). Astin and Scherrei (1980) wrote:

Although the works of the early organizational theorists remained fairly obscure until after World War II, they laid the groundwork for one of the three major schools of management: scientific management. This classical approach contains both a theory of motivation and a theory of organization. (p. 6)

Scientific management theory stressed effectiveness and control and coincided with the concept of machine-like efficiency. In this view, successful operation depended on the function of each part; therefore, an organization's successful operation depended on each worker's task. In addition, this theory espoused narrowly defined tasks, standardized procedures, and strictly ordered supervisory chains of command. Scientific management has

been credited to Fredrich W. Taylor who, in 1912, proposed that to motivate workers, payment should be as closely tied to output as possible.

This scientific approach was supported by other theorists such as Gullick and Urwick (1937), who stated that:

... the resulting organization resembles a 'pyramid,' with workers or subordinants at the base and the top executives at the apex. This type of organization stresses specialization and thus is divided according to task and purpose. (p. 6)

A leading writer who described the scientific style of management was Max Weber (1947). He defined organizations as bureaucracies run by rules and divided internally by functions. These bureaucracies were designed for efficiency which would result in higher productivity.

The Humanistic/Person-Oriented Management Theory

By the 1950s, as resentment and frustration against the scientific approach became increasingly overt, a more humanistic approach began to emerge in organizational theory. This movement resulted in the humanistic/person-oriented approach in which the worker rather than the organization became the focus of attention (Astin & Scherrei, 1980). Many views concerning the humanistic approach as a theory in the workplace were explained and shared, but, according to Astin and Scherrei, leading scholars of the 50s (i.e., Drucker, Herzberg, and Maslow) were in agreement that "adults need to share the responsibility rather than be cast into childlike,

dependent roles in their work settings" (Astin & Scherrei, 1980, p. 7). Many theorists have discussed the intrinsic and extrinsic motivational factors involved in the work setting but, in effect, the humanistic approach maintained that when an employee's social and psychological needs are satisfied, cooperation and efficiency are enhanced, and this results in higher productivity (Astin & Scherrei, 1980; Hoy & Miskel, 1987).

Douglas McGregor (1960) has explained the "how" and "why" of the scientific and humanistic management styles by focusing on how managers define working personnel in the two models. The "Theory X" manager (scientific) is autocratic (how) because s/he holds the assumption that people do not like work and try to avoid it. Since people do not like work, managers have to control, direct, coerce, and threaten employees to get them to work toward organization goals. In this conception, the rationale is that people prefer to be directed, try to avoid responsibility, and have little ambition. In contrast, the "Theory Y" manager (humanistic) is a team manager. This manager's assumptions are different in that s/he holds that people do not naturally dislike work; work is a natural part of their lives. People are internally motivated to reach objectives to which they are committed. People are committed to goals because they receive personal rewards when they reach their objectives. People both seek and accept responsibility when under favorable conditions. People have the capacity to be innovative and this creativity will help solve organizational problems. Finally, the humanist

theory suggests that people are bright, but because most organizations do not have the ideal working conditions, people do not achieve their maximum potential. The shortcomings of the scientific and humanistic approaches eventually promoted a third, more practical model.

The Behavioral/Structuralist Management Theory

The third iteration of management theory embodies a combination of the previously discussed scientific and humanistic models. According to Hoy and Miskel (1987), the behavioral science approach utilizes both perspectives and adds propositions from psychology, sociology, political science, and economics to examine work behavior in the formal organization.

Much of the work on the behavioral theory originated with Chester I. Barnard through his book, Functions of an Executive, published in 1938. The structural concepts that he considered relevant were the individual, the cooperative system, the formal organization, the complex formal organization, and the information organization. He also stressed the importance of free will, cooperation, communication, authority, the decision process, and dynamic equilibrium (Hoy & Miskel, 1987).

Models of Governance

As the three management theories have been adapted and transferred to higher education, researchers (Astin & Scherrei, 1980; Baldrige et al., 1977; Cameron, 1985; Lindquist, 1978; and others) have pointed out that

colleges and universities can differ greatly from corporations, factories, and government offices. The goals and missions of institutions of higher learning can be diffuse and ambiguous compared to those in most business professions. However, there are three models of governance in higher education that do lend themselves to comparison and contrast with the scientific, humanistic, and behavioral approaches previously discussed. These three models are the bureaucratic, political, and collegial models of academic governance. Estela M. Bensimon (1989) provided a concise and articulate analysis of these three governance models.

The Bureaucratic Model

The bureaucratic model of governance places emphasis on establishing clear channels of authority. The chain of command is from the top down, much like a pyramid structure. By establishing that subordinates know their place in the organizational structure and by clearly delineating their particular job descriptions, the proponents of this model pride themselves on its productivity and efficiency. The decisions that are made in this model are initiated at the upper administrative levels. These decisions are then acted upon by the appropriate personnel at the lower levels of the governance system. Baldrige (1971), Bensimon (1989), and Weber (1947) each have written extensively about this style of governance.

The Political Model

Several researchers (Baldrige, 1971; Bensimon, 1989; Walker, 1979) have produced works discussing the political model of governance, which places its emphasis on political power. To be a part of the decision making process, one must become active in the political process of any decision that is of interest. This power can come either formally or informally. As members decide to be a part of a particular decision, they align their support either for or against the decision that is being acted upon. The issue of "power" in this model is constantly changing. As Walker (1979) suggested, diplomacy and persuasion should be the primary administrative tools of presidents; well defined goals can still be achieved while demonstrating flexibility and openness in communication. This style of governance allows for conflict that the organization tries to utilize in a positive way to enhance the decision making process. By exchanging views, information, communication, and power, the political model is truly a political process in action.

The Collegial Model

In the collegial model of governance, the human resources and needs of the people come first. According to Millett (1962), this framework pictures colleges and universities as communities of scholars who, by virtue of their professional expertise and a shared value system, control organizational goals. This model stresses the importance of collaboration between faculty and administration to realize the interests of the institution as a whole. It is

through this collaboration that each member works not only to achieve their own potential, but to assist one another in reaching the optimal aggregate potential of all members for the good of the institution (Bensimon, 1989).

An additional attribute of the collegial model of leadership is strong leadership/flat hierarchy. From the research of Rice and Austin (1988), it can be concluded that leadership can be forceful while simultaneously being non-hierarchical. Another contributor to this theme was Rosabeth Kanter (1983), who stated that power begets power. These researchers contend that those in positions of influence give power away and share authority. By following these dictates, a leader empowers others, thereby enhancing the effectiveness of the organization as a whole.

Another key component of the collegial approach is the willingness to share information. As trusting and respectful members form a collegium, the opportunity to communicate and enhance each other's viewpoints increases. As faculty members and administrators share dialogue, a family atmosphere begins to build and permeate throughout the institution (Rice & Austin, 1988).

An additional contributor to the research on collegial governance was Moomaw (1984). He suggested incorporating five principles into academic leadership: (1) articulating mission and goals, (2) developing a leadership team, (3) encouraging broad involvement and new ideas, (4) evaluating, and (5) using a reward system. Moomaw went on to propose that the academic

leader needs to balance these components in such a way as to provide guidance while also allowing for the channels of democracy.

Guskin and Bassis (1985) likewise suggested that the collegial approach is one of the most effective modern leadership styles. Their view of this approach utilized the concept of the team leader. The leader attempts to create an interpersonal environment among senior administrators and also throughout the campus. The approach is more concerned with the process by which decisions are made than with the decisions themselves. In this process, creativity is enhanced and promoted, and collaboration is the key component that links faculty and administrators into a common cause. Thus, in this type of leadership, the faculty develop a sense of ownership. With the sense of ownership, faculty become more secure, proud, and involved in what they believe to be their governance system.

Relationship of Models of Governance to the MCSI Survey Tool

In reviewing the three models of governance (bureaucratic, political, and collegial), it seems appropriate to suggest the relationship of these models to the survey instrument used for this analysis. As defined in the purpose of the study, this analysis categorized participative decision making on a continuum scale from 10 (tell) to 28 (join). In relating the Management Communication Style Instrument (MCSI) to the review of academic governance, *tell* closely relates to the bureaucratic model, *sell* relates to

the political model, and *consult* and *join* correspond with the collegial model.

Relationship of Faculty Job Satisfaction
to Participative Decision Making
and Faculty Rank

Historically, job satisfaction has been of great interest to researchers, individuals, organizations, and businesses. Researchers have identified many variables associated with job satisfaction, such as co-workers, working conditions, attitudes toward work, pay, and promotion. The literature also indicates that many perspectives of job satisfaction have been developed into theoretical approaches, including need fulfillment (Schaffer, 1953), discrepancy theory (Locke, 1969), equity theory (Adams, 1963), and Herzberg's two-factor theory (Herzberg et al., 1959). Although job satisfaction can be examined and explained through an array of theories, "the most widely accepted conceptualization of job satisfaction is that of Smith, Kendall, and Hulin (1969) who identify dimensions of satisfaction with supervisor, pay, work, co-workers, and promotion" (V.E. Wheelless et al., 1983, p. 146). Job satisfaction can be portrayed to have extensive meanings and will continue to be further analyzed, but many researchers have concluded that it can best be defined as "one's response to various facets of the work environment" (V.E. Wheelless et al., 1983, p. 146).

Job satisfaction has been linked to mental health, work environment, creativity, productivity, communication with supervisors, supervisor's receptivity to information, participative decision making, and many other related areas. This study will concentrate on how job satisfaction relates to participative decision making and faculty rank. Participation in decision making has received considerable attention as it relates to employee job satisfaction. Studies by Falcione (1974), Harrison (1981), Lewin et al. (1939), and Tannenbaum and Schmidt (1958) have shown that there is a positive relationship between participation and job satisfaction. Most of these studies have been correlational in nature, often examining additional variables that relate to job satisfaction as well.

Richmond and McCroskey (1979) extended the effects of participative decision making on job satisfaction by examining the relationship between communication behavior of the supervisor to participation. They concluded from their study that a management style that consults with employees is more likely to exhibit higher employee satisfaction than a style that does not incorporate participative decision-making. This research, supported by other studies, indicates that ownership in the decision making process brings about a sense of fulfillment and that this increased fulfillment coincides with increased commitment, responsibility, risk taking, and creativity.

As participative decision making is closely related to job satisfaction and can increase commitment and responsibility, faculty rank has also been

linked to an individual's commitment to an organization (Salancik, 1979). Increased rank for faculty is usually associated with increased privileges, salary, and responsibility. As this responsibility develops, so too does the responsibility and the sense of ownership in the decisions that will be made in reference to the institution. In a study supported by the Stanford Project on Academic Governance (Baldrige et al., 1978), rank, age, and longevity were all seen as pertinent components that related to commitment to the organization. This study concluded that faculty status was the leading component of institutional identification. These findings suggested that faculty rank had a direct correlation with institutional identification and thus commitment, responsibility, and ownership. These components also coincide with participative decision making as necessary ingredients of job satisfaction.

Summary

The review of literature clearly suggests that there is a need to involve faculty in the decision making processes on college and university campuses. The literature also suggests that participative decision making is not only appropriate for liberal arts institutions, but that it can relate to increased job satisfaction. Numerous studies and large amounts of research have been conducted that affirm job satisfaction is an integral part of any work environment. Although job satisfaction has been linked to many

components of the work environment, this analysis will examine job satisfaction as a contributing component of the research in higher education administration.

CHAPTER 3

METHODOLOGY

Introduction

This investigation analyzed how management communication style and faculty rank related to faculty job satisfaction. This chapter describes the sample, methods of data gathering, selected respondents, survey instruments used, reliability and validity of the survey instruments, independent and dependent variables, how the data were recorded, statistical hypotheses tested, analytical devices used to test the hypotheses, levels of significance, precautions for authenticity and accuracy, and limitations and delimitations of this study.

Population and Data Gathering Procedures

This study included independent, liberal arts institutions in Montana, Idaho, South Dakota, Oregon, Nebraska, and Washington. The institutions included in the study were all private, four-year colleges. According to Rice and Austin (1988), these small, private, four-year institutions can be categorized as being similar in size, mission, clientele, and organizational

structure. The institutions in this study had faculties ranging in size from a low of 32 to a high of 130. In identifying participating institutions, it should be noted that 14 institutions (of the defined category) declined to be a part of this study. In the original proposal of this study, South Dakota and Nebraska were not listed as states that would be included in the Northwest. With a significant number of declines, it was necessary to include additional similar institutions in other states to obtain a larger sample. Ten institutions did agree to be a part of this study. The Academic Vice-President, Dean, or Provost was contacted at each participating institution either by telephone, letter, or both, and was given an explanation of the purpose of the study. Following this initial contact, copies of the survey instruments were sent. These were returned to the Department of Education at Montana State University. The survey instruments and instructional letter are found in Appendices A, B, and C.

The institutions participating in this study are referred to only in aggregate. Confidentiality was assured to each participating institution. The following 10 institutions participated in this study: (1) Augustana College, Sioux Falls, South Dakota; (2) Carroll College, Helena, Montana; (3) College of Great Falls, Great Falls, Montana; (4) College of Idaho, Caldwell, Idaho; (5) Concordia College, Portland, Oregon; (6) George Fox College, Newberg, Oregon; (7) Hastings College, Hastings, Nebraska; (8) Mount Marty College, Yankton, South Dakota; (9) National College, Rapid City, South Dakota; and (10) Saint Martin's College, Lacey, Washington.

Listed below is pertinent information relative to selected survey respondents and mailing of survey instruments:

- (1) Selected respondents included all faculty members from the previously mentioned institutions, each of whom received a survey instrument. The total sample for this analysis was 574. There were 246 respondents; of the 246 returned responses, 236 were usable. Therefore, the actual usable return rate was 41%.
- (2) Surveys were sent to all half-time/full-time faculty members at the 10 participating institutions. The number of faculty members at each institution varied from 32 to 130.
- (3) There were several alternatives suggested in order to gather the needed responses for this analysis. The alternative that was incorporated in this study was to include the number of institutions necessary to reach an acceptable total population (574) and still remain in the desired geographical region (Northwest), while obtaining an acceptable return rate to control for the error rate. The response rate that was obtained in this analysis was 41%. Second mailings were done to reach this overall return rate.

Survey Instruments Used

The information needed to perform this analysis was gathered through two survey instruments. The first was the Management Communication

Style Instrument (MCSI). Data from this instrument were recorded by analyzing the responses from a 19-point scale (see Appendix A). This scale ranges from 10 (tell) to 28 (join). The MCSI was developed by Richmond and McCroskey (1979). There were three responses required on the MCSI: (1) "Who is your immediate supervisor?"; (2) "What management communication style does your immediate supervisor use?"; and (3) "What management communication style does your central administration use?" These responses were recorded on a computerized general-purpose answer sheet (see Appendix D). The responses to question (3) were not utilized in this analysis; these data were gathered for future studies and research (see recommendations, Chapter 5).

The second survey instrument, the Job Description Index (JDI), is found in Appendix B. This instrument utilized 72 responses in five areas of job satisfaction. The JDI was developed by Smith, Kendall, and Hulin in 1969. Respondents were asked to answer with *yes*, *no*, or a question mark (?) if uncertain about a response.

Recording of Data for Computer Analysis and Weighting

Scoring weights used in recording the data for the JDI are shown in Table 1. The weighting of the responses was performed in a separate data file. This file simply took the data file and assigned the appropriate weight to each selected response.

Table 1. Traditional and revised weights for direct scoring of JDI items.

Response	Scoring Weight
Yes to a positive item	3
No to a negative item	3
? to any item	1
Yes to a negative item	0
No to a positive item	0

Source: Smith et al. (1969, p. 79).

Reliability and Validity of Survey Instruments

The two survey instruments utilized in this analysis were the Management Communication Style Instrument designed by Richmond and McCroskey in 1979, and the Job Descriptive Index that was developed by Smith, Kendall, and Hulin in 1969.

The MCSI examined the communication style that was used by the respondent's immediate supervisor. This instrument has exhibited a test-retest reliability of .85 when tested by Richmond and McCroskey (1979). In their first analysis, the instrument was utilized in a study involving 183 public school teachers. In a study published in 1982 by Richmond et al., the MCSI had a test-retest reliability of .87. This study included 250 public school teachers.

The MCSI has been used in additional studies by Richmond et al. (1980), V.E. Wheelless et al. (1983), and L.R. Wheelless et al. (1984). The instrument was utilized to examine the communication styles of four managers of organizations and classified employees at an eastern university in these studies. In these studies, test-retest reliabilities were not feasible. All of the articles referred to the previous test-retest scores of .85 and .87. The MCSI has exhibited high concurrent validity through a variety of analysis techniques employed by Richmond and McCroskey (1979). They stated:

Through a series of analyses involving single-factor, two-factor, and multiple-factor approaches, the MCSI has been shown to be significantly correlated with the supervision, work, and promotion components of other instruments of measure involving employee satisfaction. (p. 367)

The second survey instrument utilized in this analysis was the JDI, developed by Smith et al., (1969). This multiple-factor instrument examines employee satisfaction. The five dimensions of satisfaction include: supervision, work, pay, promotion, and co-workers. The JDI has been utilized in numerous studies where job satisfaction has been examined (Falcione et al., 1977; Hurt & Teigen, 1977; Richmond & McCroskey, 1979; Smith et al., 1969; V.E. Wheelless et al., 1983; L.R. Wheelless et al., 1984). The JDI has exhibited reliabilities ranging from .73 to .92 on the five dimensions of job satisfaction. Respondents in these analyses have included public school teachers, organizational managers, classified employees from a university,

supervisors from manufacturing organizations, service employees, bank managers, and others.

Smith et al. (1969) put the JDI through extensive analysis to ensure its reliability and validity. In general, their results have held up across a wide spectrum of groups and subjects in relation to measuring satisfaction. The JDI has exhibited consistent discriminant and convergent validity. Validity was assessed by a modification of the Campbell-Fiske model (Campbell & Fiske, 1959) for establishing convergent and discriminant validity using cluster analysis and principal component analysis. Smith et al. (1969) utilized four studies to validate the JDI. The first study (Study A) consisted of 166 respondents in the first phase, most of whom were Cornell University undergraduate students, and the second phase used 317 undergraduates, some of whom were respondents in the first phase. Through varimax rotation of the principal component factors, 71% of the total variance of the 24 variables was accounted for.

The second study (Study B) by Smith et al. (1969) was designed to test the generality of the results from Study A for a somewhat different set of measures and for a working population. This study involved 80 randomly selected employees of a farmers' cooperative. Two of the rating methods that were utilized in the first study were included in this study along with two additional rating methods. The nine factors in this study accounted for 74% of the total variance in the 31 measures used.

Study C, the third study, was a field test of the final version of the JDI in an electronics industry. Smith et al. (1969) stated:

On the basis of the evidence from Studies A and B of the soundness and validity of the direct scoring method of the JDI and effectiveness of item selection, each scale has been shortened to its final version. The final goal of the present series of studies was to develop measures of satisfaction for use in subsequent studies. (p. 55)

Study C included 81 male employees from two plants of a large electronics manufacturer. The JDI scores were intercorrelated with the job aspects of work, pay, promotion, supervision, and co-workers. The matrix was again factored by the principal component method with unities in the main diagonal, and these five factors were also rotated with the varimax criterion. These five factors accounted for 75% of the total variance.

The fourth and final study (Study D) utilized a factor analysis of JDI items and included 80 employees from a large bank (Smith et al., 1969). This study showed that the discriminability obtained for the several areas applies to total scores cumulated for each area, but that adequate discriminability exists at the level of specific items which make up the content of total scales. A centroid factor analysis of 72 items pooled from all five scales was performed by Maas (James Maas). The five factors were rotated with the quartimax criterion. The results from this study showed that generally distinct factors emerge for each of the five job areas. According to Smith et al. (1969, p. 67), "Many of the items intended to measure satisfaction

with a particular area appear with their highest loadings for that area (discriminant validity)."

In order to fully understand the extensive testing and validation of this instrument, reference should be made to Smith et al. (1969), pages 37-68. Numerous tables and documentation are provided of the methods utilized, including varimax rotation of principal components. Tables are also provided that demonstrate correlations between the JDI and various measures and ratings. Quartimax rotation tables are also exhibited. The five areas of job satisfaction have been factor loaded and analyzed and have exhibited their discriminant and convergent validity.

Independent and Dependent Variables

The independent variables in this analysis were faculty rank (assistant professor, associate professor, full professor, and other) and the management communication styles of tell, sell, consult, and join. The dependent variables were five scales of job satisfaction as defined and measured by Smith et al. (1969): work, supervision, pay, promotion, and co-workers.

Methods for Organizing the Data

All participants were provided with a General Purpose-NCS Answer Sheet (Appendix D) to record their survey responses. By utilizing these computerized response sheets, the data were readily accessible to be

retrieved into data files which were used to organize and prepare the data for statistical analysis. An instructional letter is presented in Appendix C. By providing these instructions, this analysis was able to record the following data: the respondent's age, years at that particular institution, professorial rank, and tenure status. Responses for the JDI were recorded in spaces 1-72; responses for the MCSI were recorded in spaces 109-148.

Statistical Hypotheses

In order to determine whether a relationship exists between job satisfaction, professorial rank, and management communication style, 15 null hypotheses were developed. Hypotheses 2, 3, 5, 6, 8, 9, 11, 13, 14, and 15 were tested by one-way analysis of variance, and Hypotheses 1, 4, 7, 10, and 13 were tested by two-way analysis of variance. A multiple classification analysis was also performed. The multiple classification analysis examined the independent variables of faculty rank and management communication style simultaneously with each subcomponent of job satisfaction to determine how much of the variance was being accounted for in each sub-dependent category. Statistical analysis was performed by computer utilizing the Statistical Package for the Social Sciences (SPSS).

Null Hypotheses 1 through 15 are listed below:

- (1) There is no significant interaction between the independent variables of faculty rank and management communication style on the dependent variable of job satisfaction/work.

- (2) There is no difference between faculty ranks on the dependent variable of job satisfaction/work.
- (3) There is no difference between management communication styles on the dependent variable of job satisfaction/work.
- (4) There is no significant interaction between the independent variables of faculty rank and management communication style on the dependent variable of job satisfaction/supervision.
- (5) There is no difference between faculty ranks on the dependent variable of job satisfaction/supervision.
- (6) There is no difference between management communication styles on the dependent variable of job satisfaction/supervision.
- (7) There is no significant interaction between the independent variables of faculty rank and management communication style on the dependent variable of job satisfaction/pay.
- (8) There is no difference between faculty ranks on the dependent variable of job satisfaction/pay.
- (9) There is no difference between management communication styles on the dependent variable of job satisfaction/pay.
- (10) There is no significant interaction between the independent variables of faculty rank and management communication style on the dependent variable of job satisfaction/promotion.

- (11) There is no difference between faculty ranks on the dependent variable of job satisfaction/promotion.
- (12) There is no difference between management communication styles on the dependent variable of job satisfaction/promotion.
- (13) There is no significant interaction between the independent variables of faculty rank and management communication style on the dependent variable of job satisfaction/co-workers.
- (14) There is no difference between faculty ranks on the dependent variable of job satisfaction/co-workers.
- (15) There is no difference between management communication styles on the dependent variable of job satisfaction/co-workers.

Analysis of Data

Hypotheses 1, 4, 7, 10, and 13 were tested through a series of two-way analyses of variance. The two-way analysis was conducted to determine if there was interaction between the independent variables of rank and management communication style on the dependent variables of job satisfaction. Hypotheses 2, 3, 5, 6, 8, 9, 11, 12, 14, and 15 were tested through a series of one-way analyses of variance to determine if there was a difference between the means of the four factors of each independent variable. The Student Newman Keuls post hoc analysis was used in conjunction with the one-way analysis of variance to examine the differences between the

means of each independent variable. A multiple classification analysis was also utilized to examine the independent variables of faculty rank and management communication style simultaneously with each subcomponent of job satisfaction and to determine how much of the variance was being accounted for in each sub-dependent category.

Level of Significance

The null hypotheses of this study were tested at the .05 level of significance. Kerlinger (1973, p. 70) suggested that the .05 level of significance is appropriate for most social scientific research. The effects of setting a significance level determine the consequences of committing a Type I or Type II error. A Type I error occurs when a true null hypothesis is falsely rejected. A Type II error occurs when a null hypothesis is falsely retained. In this study, a Type I error might result in time and money being spent on policy to promote faculty and administration working together when that is not what is needed to promote job satisfaction. In addition, if a Type II error was committed, the information needed to enhance an effective faculty and administrative work environment might not surface and thus no effective change would be discussed. As both types of errors were analyzed, it was determined that either would be equally detrimental to this study, and thus the rationale and choice of the .05 level of significance.

Precautions Taken for Authenticity and
Accuracy of Data

All 236 of the data sheets used for this analysis were inspected individually as they were retransferred to usable General Purpose-NCS Answer Sheets. (It should be noted that some questions were not answered, and thus there are not 236 responses for all of the questions.) Ten responses were omitted because they were incomplete. As the data were organized into data files, random checks were performed to ensure that the data were being transferred correctly, were being weighted correctly, and were being counted correctly through a frequency file. This process became very time-consuming as the computer was unable to determine if there was a response in some cases; thus the researcher had to retrieve the original data sheet and hand-enter the data. However, this process did complement the authenticity and proper recording of the data.

The statistical portion of this analysis was calculated via computer using the Statistical Package for the Social Sciences (SPSS). The data were entered into the SPSS computer system from the previously mentioned data files. As stated, the data were randomly checked numerous times by the researcher during this analysis to ensure that they were being recorded, weighted, and counted correctly.

Limitations and Delimitations
of the Study

- (1) This study was limited to private, four-year liberal arts institutions in Montana, Idaho, Washington, South Dakota, Oregon, and Nebraska.
- (2) This study was limited to data that were gathered through the use of two survey instruments.
- (3) The results of this study were delimited to the Management Communication Style Inventory that ranks perceived participatory decision making from 10 (tell) to 28 (join).
- (4) The data from this study were delimited to the views of the faculty members and to their particular responses concerning rank, perceived participation, and job satisfaction as indicated on the Job Description Index responses.
- (5) The study was conducted in the spring of 1990.

CHAPTER 4

ANALYSIS OF DATA

Introduction

This investigation analyzed how management participation style and faculty rank related to faculty job satisfaction as it was proposed in the purpose of this study. The independent variables in this analysis were faculty rank (assistant professor, associate professor, full professor, and other). The management communication styles consisted of tell, sell, consult, and join. The dependent variables were five scales of job satisfaction as defined and measured by Smith et al. (1969): work, supervision, pay, promotion, and co-workers.

The statistical portion of this analysis was calculated by computer using the Statistical Package for the Social Sciences (SPSS). Data were entered into the SPSS computer system from the previously mentioned data files. The level of statistical significance used through this analysis was .05.

This chapter includes the preceding introduction along with the following: the study population, statistical hypotheses, one-way analysis of variance

tables, two-way analysis of variance tables, the multiple classification analysis table, and the hypotheses summary table.

Study Population

The selected respondents for this study included faculty members from 10 institutions. Table 2 shows the sample number of faculty from each institution along with the number of respective returned responses.

Table 2. Number of faculty surveyed and number of returned responses by participating institution.

Institution	Sample	Return
Augustana College, Sioux Falls, SD	130	61
Carroll College, Helena, MT	74	29
College of Great Falls, Great Falls, MT	36	10
College of Idaho, Caldwell, ID	47	22
Concordia College, Portland, OR	32	14
George Fox College, Newberg, OR	50	24
Hastings College, Hastings, NE	66	31
Mount Marty College, Yankton, SD	50	17
National College, Rapid City, SD	39	18
Saint Martin's College, Lacey, WA	50	21

All of the faculty members who were of half-time status or more at these participating institutions received a survey instrument. The total sample for this analysis was 574. There were 246 respondents and 236 usable responses, for a return rate of 41%.

Statistical Analysis

Statistical Hypotheses 1, 4, 7, 10, and 13 were tested for interactions and main effects by a two-way analysis of variance statistical procedure. Hypotheses 2, 3, 5, 6, 8, 9, 11, 12, 14, and 15 were tested through a one-way analysis of variance, and the Student Newman Keuls post hoc test was applied to determine if there was a significant difference between the means of the independent variables. The significance of all analyses of variance was determined by an alpha level of .05. A multiple classification analysis was also performed. All of the statistical calculations were performed by using the Statistical Package of Social Sciences (SPSS) computer program.

The 15 hypotheses are comprised of five clustered sets of three hypotheses each. Individual clusters are linked according to one of the five dependent variables of job satisfaction: work (Hypotheses 1-3), supervision (Hypotheses 4-6), pay (Hypotheses 7-9), promotion (Hypotheses 10-12), and co-workers (Hypotheses 13-15).

Four tables have been developed to present statistical data for each cluster set of hypotheses. The first is the table of means for the dependent variable by faculty rank and management communication style; the second is the two-way ANOVA table for the dependent variable by faculty rank and management communication style; presented third is the one-way ANOVA table for the dependent variable and faculty rank; and last is the one-way

ANOVA table for the dependent variable and management communication style.

Null Hypotheses 1, 2, and 3

- (1) There is no significant interaction between the independent variables of faculty rank and management communication style on the dependent variable of job satisfaction/work.
- (2) There is no difference between faculty ranks on the dependent variable of job satisfaction/work.
- (3) There is no difference between management communication styles on the dependent variable of job satisfaction/work.

Analysis of variance for Hypothesis 1 is summarized in Table 4, with the graphic display of cell means presented in Table 3; 236 cases were processed.

Table 3. Table of means for job satisfaction/work by faculty rank and management communication style.

Faculty Rank	MANAGEMENT COMMUNICATION STYLE							
	Tell		Sell		Consult		Join	
	Mean	No.	Mean	No.	Mean	No.	Mean	No.
Assistant	36.75	16	39.13	8	39.08	38	42.72	25
Associate	35.57	7	37.56	9	40.83	23	36.16	19
Full	32.00	3	43.00	7	40.59	22	44.06	16
Other	33.75	4	38.57	7	40.29	17	43.11	9

Table 4. Two-way ANOVA table for job satisfaction/work by faculty rank and management communication style.

Source of Variation	Sum of Squares	DF	Mean Squares	F	Signif. of F
Main Effects	957.421	6	159.570	2.597	.019
Faculty rank	269.550	3	89.850	1.462	.226
Mgmt communic style	650.611	3	216.870	3.529	.016
2-way Interactions	692.343	9	76.927	1.252	.265
Rank x MCS	692.343	9	76.927	1.252	.265
Explained	1649.764	15	109.984	1.790	.038
Residual	13150.584	214	61.451		
Total	14800.348	229	64.630		

The p-value of Hypothesis 1 was .265. This indicated that no two-way interaction existed between faculty rank and management communication style with regard to job satisfaction/work.

Table 5 displays the one-way analysis of variance between the dependent variable of job satisfaction/work and the independent variable of faculty rank. No two groups were found significantly different when examining job satisfaction/work with faculty rank when utilizing the Student Newman Keuls post hoc procedure.

Table 6 presents the one-way analysis of variance between job satisfaction/work and management communication style. Results of the Student Newman Keuls post hoc procedure indicated the following: group 3 (consult) was statistically greater than group 1 (tell), and group 4 (join) was also statistically greater than group 1 (tell) when examining job satisfaction/work and management communication style. No other groups differed significantly.

