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FACULTY PERCEPTION OF INSTITUTIONAL FUNCTIONING AT SIX
SELECTED UNIVERSITIES THROUGHOUT THE UNITED STATES

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FACULTY PERCEPTION OF INSTITUTIONAL FUNCTIONING
AT SIX SELECTED UNIVERSITIES THROUGHOUT THE UNITED STATES

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF EDUCATION IN EDUCATIONAL ADMINISTRATION

August, 1983

By
Angela Louise Chaille

Dissertation Committee:
John A. Thompson, Chairman
Charles T. Araki
Doris M. Ching
Richard H. Kosaki
Sheldon S. Varney
Many wonderful people have helped in the completion of my doctoral studies and in the development of this dissertation. While it is not possible to name them all here, I hope that they are aware of my sincere gratitude.

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ABSTRACT

The purpose of this research was to systematically gather data and compare faculty perceptions of the institutional functioning of six closely matched universities. Comparisons were made between subscale scores on a standardized instrument, The Institutional Functioning Inventory, of faculty groups by institution and by common demographic characteristics. The problem that the study sought to answer was whether faculty at institutions with similar support systems and missions differed significantly in their perceptions of institutional functioning at their universities, and whether faculty within and among universities when grouped by certain demographic variables, showed significantly different responses on the various dimensions of the inventory.

In presentation of the situational milieu of the problem, five major issues were addressed as currently important factors whose change may be affecting American universities. These factors were enrollment, economic issues, accountability, collective bargaining, and public opinion. In addition, theoretical constructs were
discussed supporting the premise that common environmental circumstances might create common perceptions of university functioning.

The population to which this study sought to generalize was the faculties of six universities with similar missions and other organizational and student characteristics. All of the universities were state controlled, coeducational, urban universities within a class of major research and teaching universities in the United States. The universities were chosen because of their similarities to the University of Hawaii at Manoa, and consisted of the University of Hawaii, the University of Colorado, the University of Connecticut, the University of Oklahoma, Washington State University, and Florida State University.

A stratified random sample of faculties was drawn from the population. The sizes of the sample groups were large enough to provide a ninety-seven percent confidence interval. The high confidence interval was chosen to compensate for the possibility of a small return. Each sample was chosen to proportionally represent the number of faculty within each college of a university so that there would be good fit between each sample and its parent population.

Surveys, answer sheets, and letters of participation were mailed directly to each faculty member in the sample.
Return envelopes were provided. Sufficient responses were received to provide a ninety-five percent confidence level. The answer sheets were hand-scored using cut stencils, and data were recorded manually and input into the University of Hawaii Computer Center.

A Cochran's C test was used to show the respondents to have been relatively homogeneous in their responses. The majority of respondents were found to be full professors, had been at their universities over twelve years, and taught nine credit hours or less. A Chi Square test showed only two significant differences between the descriptive characteristics of the faculties, in Academic Rank and years of Service. For nine of the eleven descriptive characteristics there were no significant differences between the groups.

The first hypothesis examined whether significant differences existed among the six faculty groups on scores of the eleven subscales of the inventory. This hypothesis was tested using Oneway Analysis of Variance. The means of the faculties varied significantly on eight of the subscales. A Scheffe test was used to determine which of the six universities varied from the others. Significant differences were found on seven subscales for the University of Hawaii, three for Washington State University, one for the University of Colorado, and one for the University of Connecticut. As a result the null
hypothesis that no such differences would be found was rejected. This led to a major conclusion of this research that in spite of similarities of mission and support systems, commonality of many internal and external factors, and relative homogeneity of faculty characteristics, faculty perceptions of their universities do significantly differ.

Hypothesis Two examined the faculties grouped by five characteristic variables, Field of Affiliation, Age, Academic Rank, Workload, and Years of Service. This was tested using Oneway Analysis of Variance to determine if significant differences existed on scores when grouped by the various characteristics. The characteristic linked to the most differences was Field of Affiliation which showed significant differences on eight subscales. The variable Years of Service showed significant differences on six subscales, and Academic Rank showed such differences on three. The variable Age showed significant differences on three subscales, and Workload showed difference at the p ≤ .05 level for only one. The null hypothesis was not rejected because only these twenty-one, of fifty-five possible, significant differences were found.

Regression analysis was performed to answer Ancilaary Question One, which asked whether linear relationships existed between the characteristic variables (or groups of
variables) discussed in Hypothesis Two and the subscale scores. Two regression analyses were used for this question, first looking at the entire sample and then at those universities within the sample for which significant differences had been identified in the first hypothesis. Relationships were found which could be used for the development of predictive equations, most of the coefficients of determination were in a range from five to fifteen percent.

The analysis of the second ancillary question looked for significant differences in subscale scores when grouped by three additional variables, College of Affiliation, Stress of Assignment, and Undergraduate/Graduate Matriculation. Few significant differences were found.

The results of this research mirrored a study performed at Columbia University in many ways. Negative perceptions of participation in governance and shared purposes were found in both studies. This decline in faculty participation in governance, involvement in planning, and in sense of shared purpose were said to reflect a general lowering of faculty morale.
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CHAPTER ONE

Introduction and Statement of the Problem

The purpose of Chapter One was to provide a documentary and theoretical background for the research problem which was examined in this dissertation. The situational milieu in which the research problem existed is discussed and the related hypotheses are provided. This chapter also presented basic assumptions that were made in formulating the hypotheses, and defined the scope and limitations of the study.

Identification and Documentation of the Problem

This research was concerned with the comparison of faculty perceptions of the manner in which their universities were functioning. Functioning in this study referred to the measurement of characteristics perceived as important in higher education, as defined by the Educational Functioning Inventory, an instrument designed by the Educational Testing Service.¹ The instrument consisted of eleven subscales which were designed to measure various institutional characteristics using objective and subjective responses of faculty members.

In a certain sense each university functions in its own unique circumstances, but the similarities among most public universities in the United States lend support for
the contention that comparisons of responses among faculties was a rational approach to a comparison of faculty morale and institutional functioning. While this study searched for comparisons rather than causes, a brief discussion of the milieu in which academia currently exists provides a useful background to frame the problem.

Of the multitude of issues and factors which have been affecting universities and their faculties, five have been chosen as important for discussion of the environment of this research: Enrollment, Economic Issues, Accountability, Collective Bargaining, and Public Opinion. Projections of declining enrollments and the effects of an economic recession have become major predictors in studies which have attempted to gauge the market demand for higher education during the 1980's. There has been, however, substantial disagreement about the effects that these and other predictors may have on the futures of universities and their faculties. Increasing accountability, development of collective bargaining, and changes in public opinion also have been identified by the Carnegie Council and higher education analysts as factors which may be affecting internal relationships necessary to successful university function.

Enrollment has always been an important factor in university operation and planning. Any change in enrollment, whether in growth or decline, has implications
in relation to the resources of the institution, such as staffing, scheduling, physical plant development, and maintenance. Enrollment has often been used as a tool for determining levels of funding for university campuses by the state legislatures or other funding sources.

The 1970's showed slow but continued expansion in enrollment. After increasing by approximately four million in the twenty years from 1950 to 1970, enrollment in the seventies increased slowly and in some universities became static or decreased. In 1970, the estimated full time equivalent enrollment in American universities was 6,721,000. That number increased by approximately 200,000 per year through 1975. In 1976 estimated enrollment dropped by almost 200,000, but that same amount was regained in 1977. The years 1978 to 1979 showed no change in enrollment. In 1980 there was an increase of approximately 100,000, but an increase of only 200,000 is expected between 1980 and 1985. Enrollment is then expected to decrease again. 3 This shows a shifting pattern from steady growth, to virtually no growth, to decline.

The American Association of University Professors has predicted that serious enrollment declines are about to begin. 4 In More Than Survival, the authors claimed that in the United States higher education "is undergoing the greatest overall and long-run rate of decline in its growth
patterns in all history." They predicted that 1970-1985 will be a period of fast deceleration and 1985-2000 may see slow growth or no growth. These enrollment predictions, with their related economic implications, become serious in relation to the recent, current, and projected economic picture.

In the 1970's, inflation rates for higher education were higher than the rates for the general economy, and funding sources have failed to keep up. Comparing the Consumer Price Index to the Halstead Instruction Higher Education Price Index, the education index was higher than the general index four out of the six years from 1970 to 1975. In 1971-1972 the education index was higher by almost two points (1.92). The percentage increases in the education index ranged from a low of 5.11 percent in 1962-1973 to a high of 8.64 percent in 1974-1975. At the same time, state appropriations for higher education increased at an annual rate of only five percent and federal contributions began to decline.

In addition to inflation related cost increases, there were higher costs for utility and maintenance. Federally mandated social programs and regulations, as well as increased financial aid, also provided new and substantial cost burdens. At the same time, universities faced increased demands for research, services, access, and socially current programs. This gap between costs and
revenues caused some universities to institute hiring freezes and even to lay off employees.9

There was also a shift in patterns of funding during that decade. The Federal contributions to university revenues declined from an approximate proportion of eighteen percent in 1965 to approximately thirteen percent by 1974. At the same time state contributions increased from thirty-nine percent to forty-two percent.10 Concurrently, state governments generally were facing budget problems which resulted in strenuous efforts to hold down spending. This was particularly hard on those public institutions that were precluded by their state constitutions from incurring deficits and, therefore, had to find internal methods of cutting costs.11

There appears to be little question that universities will continue to face cutbacks of public funds during the 1980's. To add to the problem of decreasing general fund appropriations, the monies which universities have generated from research grants have been decreasing. While research money is not directly related to the overall operating expenses of a university, its availability has usually led to staff and space and scheduling commitments which cannot be immediately decreased to accommodate reduced funding.12

In a discussion of the implications of the economic
situation in the American Association of University Professors Annual Report of the Economic Status of the Profession, the authors reported that the serious decline in funds for salaries, equipment and related items has had a serious impact on the quality of higher education in the United States. The A.A.U.P. asserts that the effects have been particularly depressing upon the most important resource in universities, the professors, and that "morale within the professoriat is deteriorating." They reported that "real salaries" have declined by twenty-one percent over the past decade, and that the lure of higher salaries in industry and government has caused talented professors to leave teaching and promising young scholars to choose careers outside academe.13

Although the problems related to enrollment and economic shortfalls appear to be very real, there are conflicting assessments of their implications. For example, The Carnegie Council has predicted that public urban universities that are financially sound, with established reputations, will manage to maintain their enrollments and their "institutional health."14 In the Journal of Higher Education, Leslie reflected the optimism of the Carnegie Council when he said,

The long-standing and present vitality of higher education in America - its ability to maintain a relatively even keel in rapidly changing economic and social milieu - is clearly in evidence, and it seems unlikely that normal events of noncrisis proportions
will alter this inertia importantly.\textsuperscript{15}

This optimism is in contrast to the predictions of an impending crisis which have characterized the conclusions of other studies such as the American Association of University Professors report cited above.

One supposition is that the potential crisis is being created as much by expectations of enrollment declines and economic recession as by the realities. This idea was well expressed by M. L. Shattock in \textit{Higher Education},

Sparked off by demographic projections and fueled by economic recession, the "crisis" seems almost to be taking on a life of its own and is generating a level of literature and conference activity quite disproportionate to the number of new solutions that are available. The problem seems to be that as the growth in student numbers tapers off and as general reductions in governments' expenditures percolate down to universities and colleges, the recognition that some sort of watershed in higher education has been reached has been transmitted into a feeling that nemesis of some kind is upon us. In a very real sense higher education is in danger of talking itself into a crisis, and frightening itself, and governments, into unnecessarily harsh analyses of current problems and into consequential over-reactions.\textsuperscript{16}

As Shattock suggests, the current malaise among faculties in institutions of higher education may be a function of their reaction to dire predictions of impending disaster during the 1980's.

In addition to enrollment and budget, at least three other factors may have had an effect on the synergetic relationship between faculty, administration, and boards of trustees, which has been the major factor in the success of
American universities. These factors are increasing demands for strict accountability of time, money and productivity in all segments of the university, the development of faculty collective bargaining, and changes in public opinion toward the purpose and nature of universities.

For government to allocate additional resources to higher education requires that some other good or service that could have been obtained with the same resources is forfeited. In order to control costs, some legislatures have passed statutes that have in effect increased state regulation of the activities of the personnel in institutions of higher education. State legislatures have become involved in monitoring academic responsibilities which have previously been considered the business of the university governing boards.¹⁷

There have been indications that increased legislative requirements for administrative accountability have been linked with increased centralization of decision making in university systems. Governing boards and central administrations appear to have extended their authority to include decision making in areas that were once considered the responsibility of the faculties.¹⁸ Such changes, where they have been occurring, have caused a confusion over roles which may threaten the balance of power essential to
effective functioning of the university.

Some critics have cited collective bargaining as a major contributor in the decline in the traditional or collegial academy form of governance. During the decade of the seventies, collective bargaining gradually changed from a theoretic concept discussed by university faculties to an important force in the determination of faculty working conditions. It has also had direct bearing on the development of university policy in the areas of faculty rights and responsibilities. Faculty have experienced both gains and losses in their traditional perquisites as a result of collective negotiations. Policies, particularly in the area of personnel relations, have been clarified and often strengthened as a result of bargaining, but areas such as promotion and tenure, over which faculty once had extensive influence, have often been transferred to administrative control. A study at the University of Maine surveyed three hundred and sixty-seven (367) organized public collegiate institutions and found that as a result of collective bargaining, universities were experiencing "an increasingly dichotomous management-faculty relationship" and an "increase in the degree of conflict." This increase in polarization and conflict was based upon the increase in filing of grievances, as well as, arguments over university goals. On the other hand, other studies have shown that faculty in unionized
state universities were significantly more satisfied with economic conditions of their work and with their administrations than faculty in non-organized universities.23

At this time, then, the possible relationship of collective bargaining to faculty perceptions of institutional function is still not confirmed. Bargaining varies in scope and nature from state to state and university to university. Only approximately one fifth of universities are unionized24, and while some have had established unions for many years, for many the phenomenon is still relatively new and its effects not yet clear.

Public opinion can have multiple effects on the functioning of public universities. The view of the population about the public and private values of education continues to provide the context in which decisions concerning the financing of education are made. There is continuous interplay between the influences of society and the influences of institutions in determining expenditures, and of the two, societal influences are dominant.25

In addition to direct influences on financial support, political and community relationships can have effects on the control, policy, morale, and enrollment of universities. Higher education in America has always been a part of the national culture. The public has always held
opinions on "who should be educated, how the education should be conducted, what level of quality should be maintained, how the system should be organized, and what institutions should be responsible for research and public service." Society looks to universities for authority, nonpartisan expertise, and technical knowhow. The American public has traditionally seen universities as "testing grounds" for the kind of world that they wanted to create for themselves.

After many years of support by the public and by local and state governments, however, recently there has been an erosion in the public image of American universities. Some have attributed this erosion to student unrest and the growth of student power. Leslie and Otto indicate that the eroding confidence of society in higher education may be due to diminished expectations for what all societal institutions can be expected to do, rather than an indictment of what has been done. In other words, it appears that society may be looking less toward universities as source of the solutions to its problems. Consequently, this may result in having society make other choices with its resources, and place its priorities in other areas. As this transfer occurs, resources, enrollment, and the very nature of universities are adversely affected.

Whether the most notable changes are related to
economic conditions, enrollment declines, shifts in power, collective negotiations, or public opinion, it is clear that changes have been and are taking place. It appears evident also that these changes are having some effect on institutional functioning, as well as faculty morale and perceptions of their working environment. However, it does not appear that the changes have been unique to any particular university or group of universities.

The hypotheses of this study are based on the assumptions that perceptions of institutional functioning are related to environmental circumstances which are essentially common to most universities of similar size and mission. It is further assumed that the level of faculty morale is a critical factor in effective institutional functioning and is directly linked to factors known to affect job dissatisfaction such as salary, possibility of growth, policy and administration, and job security. Adverse economic conditions such as budget cuts and decreasing student enrollment appear to be problems which may pose threats to faculty satisfaction.

Universities are labor intensive enterprises; thus, faculty perceptions of their morale undoubtedly are linked to the effective functioning of universities as organizations. This presumption makes the study of relative faculty perceptions (i.e. the perceptions of
institutional functioning factors between and among various groups of faculty members during a given time period), a viable problem for research in the field of educational administration.

**Rationale for Approach to the Problem**

The theoretic constructs which generated the hypotheses were a product of the concepts of "field theory" by Kurt Lewin. In addition, job satisfaction concepts were discussed in relation to the work of Frederick Herzberg. Current related theoretical thought concerning the formation of job perceptions was presented through discussion of the work of Gerald Salancik and Jeffrey Pfeffer.

The study of job satisfaction and morale as functions of environmental circumstances may be seen in psychological constructs of Kurt Lewin's "Field Theory" which contends that a "totality of coexisting facts" provide an interdependent data field which determines individual behavior. Lewin described behavior as a function of the person and his environment, and he converted this premise into the mathematical formula $B=f(p,e)$, where $B$ represents behavior, $p$ represents the person and $e$ represents the person's environment. 29

Lewin defined the "life space" of individuals as a function of their needs and their psychological
environment. This "life space" was said to include all facts which have existence for the person including "needs, goals, unconscious influences, memories, beliefs, events of a political, economic, and social nature, and anything else that might have a direct effect on behavior."\textsuperscript{30} Lewin included thinking, achieving, wishing, and striving in his list of behaviors that were resultant of change in some state in a field of interdependent variables.

As Lewin attributed "behavior of every kind," including "thinking," to this field theory, it can be inferred that "perception" may be included as a behavior which is directly affected by changes in the "life space."\textsuperscript{31} This has implications for the current study as the changing factors discussed in the beginning of the chapter may be said to be changes in the "life spaces" of university faculties which could be affecting their perceptions of their universities.

Two experiments of Kurt Lewin and his colleagues are appropriate for inclusion in this discussion. One study found that increasing frustration reduced constructiveness and level of intellectual functioning and increased unhappiness, restlessness, and destructiveness.\textsuperscript{32} Another study showed that changes from democratic to autocratic group leadership caused disruption of activity and increased disagreement and hostility.\textsuperscript{33} While these studies were performed with groups of children, the same
principles were later used in evaluating and predicting adult morale, and imply possible implications of the situational milieu previously described. If the changing environmental factors, including governance, which were described in the prior section are creating frustration for faculties, their perceptions of their institutions may be more negative than they have been previously.

While Lewin's theory purports to describe individual behavior, he has expanded it to address the behaviors of groups as well, by saying that "Group behavior is a function of both the individual person and the social situation." He found that changes in the social situation could cause changes in equilibrium that could have an effect on the outlook of the group. This researcher contends that the recent and current budgetary and administrative dynamics facing universities are sufficient to cause such a change in equilibrium and outlook. In this case, the researcher is defining "social situation" as all of the economic, social, and governance factors affecting a particular university environment. Using the classical behavior theories of Kurt Lewin as a foundation, it is possible to provide more recent theories and postulates which add further support to the hypotheses of this research.

One related area of theory is job satisfaction which
has been defined by Gruneberg as the emotional reactions of an individual to a particular job. The theories of job satisfaction have been conveniently divided by Campbell, Dunnette, Lawler, and Weik into two categories, content theories and process theories. Content theories give an account of the factors which influence job satisfaction. Maslow's needs hierarchy theory and Herzberg's theory of job satisfaction are considered content theories. Process theories try to give an account of the process by which variables such as expectations, needs, and values interact with the characteristics of the job to produce job satisfaction. Some examples of process theories are equity theory and reference group theory.

Of the content theories, which are primarily need-satisfaction models related to employment, the work of Frederick Herzberg is the most closely related to this study. While most of Herzberg's theory was based on surveys which were carried out in industrial firms, and while criticisms have been made of his original research, his basic findings have been supported in research with teachers by Thomas Sergiovanni. It was Herzberg who considered workers to be the best judges of the function of their organization. In this study faculty are being asked to evaluate the function of the universities where they work, following Herzberg's premise that they should be among those best equipped for such an evaluation.
Herzberg described factors affecting the attitude of an individual as beginning at a neutral point, with neither positive nor negative attitude towards his job. His contention was that certain factors act as "satisfiers" that increase job satisfaction while absence of these factors returns the individual to a neutral attitude. Another group of factors act as "dissatisfiers" and decrease job satisfaction. These propositions are illustrated in Figure 1.

Herzberg found that satisfying factors usually relate to a person's internal responses to his work. These factors serve to indicate to individuals that they are successful in their work, and relate to their feelings that there is room for professional growth. Some factors which Herzberg found to be satisfying are achievement, recognition, advancement, responsibility, and the work itself.41

Factors associated with dissatisfaction were more environmental to the job itself, such as supervision, policies and administrative practices, salary, benefits and job security.42 In addition, status, possibility of growth, interpersonal relations, working conditions and personal life are considered possible factors relating to dissatisfaction.43
The contention is made, by Herzberg, that the importance that a worker places on a particular factor changes as the job situation changes or as his needs change. He also demonstrated with his research that employees with more education put greater importance on intrinsic job aspects and less stress on security than their less educated counterparts. This has implications for the current research since the faculties who were surveyed were very well educated and may, therefore, stress the intrinsic factors more than those related to security.

It is also notable that research has repeatedly shown
that the way that managers are thought to be functioning is far more important in determining the attitudes of employees than the way that they are actually performing their duties.\textsuperscript{45} Thus, if, as Shattock was quoted in the first section of this chapter, there is a great deal of "crisis" in both personal discussion and in the literature, and if concerns about loss of power are salient the perceptions of faculty about the situation perhaps will be influenced to a greater extent by these factors than by reality.

In addition, it has been demonstrated by both Whitehead and Lewin that the less involvement employees have in creating change, the more negative their response will be to the change.\textsuperscript{46} Several of the conditions cited in the previous section are changes that have been initiated externally and could, therefore, have the effects of creating negative perceptions.

The most relevant postulates for the examination of job satisfaction from the process theory approach are represented by the social information processing approach of Gerald Salancik and Jeffrey Pfeffer. They contend that "attitudes and need statements, as well as characterizations of jobs, are affected by informational social influence." Their fundamental premise is that "individuals, as adaptive organisms, adapt attitudes,
behavior and beliefs to their social context and to the reality of their own past and present behavior and situation." While these postulates meet the primary requirements for acceptance as theory they have not at present had sufficient empirical testing to qualify as descriptive theory. However, as emerging concepts they provide additional support for portions of the field theory approach.

Salancik and Pfeffer attribute three causes to the development of attitude statements:

1. the individual's perception and judgment of the affective components of the job or task environment;
2. the information the social context provides about what attitudes are appropriate;
3. the individual's self-perception, mediated by processes of causal attribution, of the reasons for his past behavior.

Figure 2 provides a graphic illustration of the postulates put forward in this work. The following paragraphs relate to various dimensions of the figure.

This approach holds that the characteristics of a job or task, such as the style of supervision or conditions of the workplace, are not given but constructed. Research has shown that the more ambiguous the job aspects, the more that the worker will rely on social comparisons to assess them. The worker is likely to use social information in developing his perceptions of the meaningfulness, importance and variety of his job.
Source:

Figure 2
A Social Information Processing Approach to Attitudes, Behavior and Job Characteristics
Individuals also use their own behavior to construct reality. The "enactment process" refers to how behavior participates in creating the environment the individual perceives. Perception is retrospective, derived from recall and reconstruction.

Social information affects attitude and need statements of workers both directly and indirectly through several processes. Four of these are (a) the effect of overt statements of co-workers, (b) structuring of attentional processes, (c) interpretation of environmental cues, and (d) interpretation of an individual's own needs.

Individuals also construct attitudes or statements about needs by cognitively evaluating the dimensions of the job or task environment. In this instance the individual may use any information which is available, past or current, for making what might be termed "rational" evaluations of their job.

Another determinant of job attitudes is the individual's past behaviors and how these behaviors come to be attributed to the environment of the person. This is affected, though, by how committed the individual is to the behavior, what information about past behavior is currently salient, and the social norms and expectations that can be considered legitimate or rational explanations for past behavior.

There are two important implications of the social
information processing perspective which should be stressed. In contrast with need-satisfaction models, workers possess the ability to construct their own satisfaction by selectively perceiving and interpreting their social environment and their own past actions. Also, job attitudes may vary with the form of the question, the questioner, or the social context that is salient when the questions are asked. 49

In summary, Lewin, Salancik, and Pfeffer particularly stressed the importance of an individual's total environment as a function of behavior. Their work gives support to the corollary that groups experiencing similar environmental and situational circumstances could be expected to respond similarly to those circumstances. In other words, university faculties experiencing similar situational and environmental circumstances may be developing common attitudes toward their institutions, and their responses on measures of institutional functioning would not be expected to differ significantly.

Herzberg was included in this section because, in addition to agreeing that external factors are important, he identified those factors as variables which are linked to dissatisfaction. His work created a basis for the postulate that if external work circumstances are becoming increasingly negative, then dissatisfaction among employees
may be increasing.

Research Questions to be Studied

The purpose of the research was to gather data systematically and compare faculty perceptions of the institutional functioning of six closely matched public universities. Comparisons were made between subscale scores on a standardized instrument, the Institutional Functioning Inventory, of faculty groups by institution and by common demographic characteristics. The problem that the study sought to answer was whether faculty at institutions with similar support systems and missions differ significantly in their perceptions of institutional functioning at their universities, and whether faculty within and among colleges when grouped by certain demographic variables, showed significantly different responses on the various dimensions of the Institutional Functioning Inventory.

Hypotheses

The hypotheses which were tested in this research were:

1. There are no significant differences $p = (\leq 0.05)$ among faculties of the University of Hawaii at Manoa, Washington State University, Florida State University, the University of Connecticut, the University of Colorado, and the University of Oklahoma, on scores of each of the eleven
subscales of the **Institutional Functioning Inventory**.

2. There are no significant differences $p = (\leq .05)$ among the faculties of the six chosen institutions on scores of each of the eleven subscales of the **Institutional Functioning Inventory** when examined by the following variables:
   a. field of affiliation,
   b. age,
   c. years of service at that university,
   d. workload,
   e. academic rank.

**Ancillary Questions**

1. Within the faculties of the institutions examined, are there linear relationships between subscale scores on the **Institutional Functioning Inventory** and the following predictor variables or combinations of the variables:
   a. field of affiliation,
   b. age,
   c. years of service at that university,
   d. workload,
   e. academic rank?

2. Within the faculties of the institutions examined, are there any significant differences between each of the subscale scores on the **Institutional Functioning Inventory** when grouped by the following variables:
   a. specific college affiliation,
   b. majority of assignment to undergraduate teaching, graduate teaching, or research,
   c. affiliation with university of own graduate
matriculation, undergraduate matriculation?

Scope and Limitations of the Study

This study addressed state supported coeducational universities in urban or metropolitan settings with student populations ranging from nineteen thousand (19,000) to twenty-three thousand (23,000). Four had selection criteria which restrict student admissions to the top fifty percent of high school classes, the remaining two selected from the top twenty-five percent.

This sample for the study was limited by factors of time and money to six universities. This limitation was not believed to be a problem, however, as the universities chosen represent approximately thirty percent of American universities with similar organizational characteristics.

Summary

Chapter One provided a documentary background for the research problem examined in this dissertation. The current situational milieu of American public universities was reviewed in relation to economic, social, and governance changes that are, or have been, taking place.

Changes in the functional environments of universities appear to be factors of primary importance to postsecondary educators today. While evaluations of the significance of these changes vary, there appears to be a sense of impending crisis.
In the rationale portion of this chapter, the importance of the external social and circumstantial environment in relation to the development of behavior and attitudes was discussed. Through the work of classical and modern theorists, the premise was supported that current situational factors may be affecting faculty perceptions of the effectiveness of the functioning of their universities.

The research problem was presented as the comparison of faculty perceptions of the functioning of their universities. The purpose of this comparison was to determine if faculties at universities with similar support systems and missions, who are facing similar circumstances, would respond in a similar fashion. The hypotheses examined this comparison, in addition to testing for differences in response among subsets of the faculties based upon demographics or college affiliation.

The study was limited to a representative sample of universities with similar organizational characteristics. A further limitation was the method of gathering data through a mail survey.
NOTES FOR CHAPTER ONE


5Carnegie, *op. cit.*

6Anderson, *op. cit.*

7AFT, *op. cit.*


9Carnegie, *op. cit.*

10Anderson, *op. cit.*

11AFT, *op. cit.*

12Carnegie, *op. cit.*

13Academe, *op. cit.*


18 Ibid.


22 Baldridge, *op. cit.*, p. 211.


26 Ibid.


30 Ibid.

31 Ibid.
32 Ibid.
33 Ibid.
34 Ibid.
35 Ibid.
38 Ibid.
42 Herzberg, Motivation to Work.
43 Herzberg, Job Attitudes.
44 Ibid., p. 50.
46 Ibid.
48 Ibid.
49 Ibid.
CHAPTER TWO
Review of the Literature

Chapter Two provides discussions of Measures of Perception, Measures of Institutional Functioning, Morale, and Job Satisfaction in Higher Education. Measures of Perception and Measures of Institutional Functioning were included in this section because of their importance in establishing the legitimacy of this research. Morale and Job Satisfaction were discussed because of their importance in the development of individual and group perception of the work environment.

Measures of Perception and Attitude

There have been several controversial issues concerning the validity and reliability of surveys designed for measurement of subjective values. These issues and responses to them are discussed below.

The use of scaled statements for measurement of individual attitudes can be traced back to the Thurstone studies of the 1920's and to his "law of comparative judgment" which provided that traits without physical counterparts could be quantitatively measured. Thurstone contended that a real number could be assigned to designate the facility that a particular item had for arousing an affective response in an individual, a greater numerical
value indicated a greater affective response. A continuum was then derived using the median scale values of the attitude items. While the Thurstone work provided a breakthrough toward the acceptance of attitude measurement, the method was very time consuming and did not provide for direct measurement of attitude outside of the continuum. Rensis Likert found, in the 1930's, that it was not necessary to scale response statements and that nearly identical results were obtained when response categories were assigned successive integers instead. He began with the Thurstone model and investigated weighting or scaling of items. Then, doing identical surveys with items that were assigned successive integers, he obtained results that were nearly identical to those from the scaled surveys. This stimulated the use of attitude surveys with succesive integer scales, commonly known as "Likert scales," as an accepted practice in attitude measurement.

The use of successive integer scales has been modified and improved as increasing research has provided information on the ideal design of such scales. Sufficient evidence has been provided that internal consistency is independent of the number of alternative responses provided. Presser and Schuman examined the measurement of a middle position in attitude surveys and found that offering an explicit middle alternative in a forced-choice attitude item often increased the proportion of respondents
in that category by approximately ten to twenty percent. This can cause individuals to receive neutral ratings which they may not feel are representative of their attitudes. On the other hand, there is some question about the desirability of forcing respondents to agree or disagree with all items. Michael Matell and Jacob Jacoby determined that the optimal number of choice categories to use on a "Likert scale" varied with the intentions of the researcher and the nature of the desired information.

In addition to the nature of the scales, however, there have been other criticisms of attitude measurement. Herzberg criticized many group job attitude studies because of the time lag between the designation of dependent and independent variables during which time attitudes might change. Another criticism was that instruments which measure agreement with positive statements may be misleading, as the weight of one or two negative statements may be more important to the individual than many of those responded to positively. This was considered particularly a problem when test items were weighted to derive an overall score. Herzberg was also concerned that several factors might distort responses; these were a "halo effect from irrelevant consideration in the testing situation," the "social acceptance" placed on the ranked factors by an individual, and other unconscious motives.
David Andrich did comparative studies which demonstrated that Herzberg's concern about affective value placed on particular items by respondents was not reflected in overall scores. He did find that a nonlinear transformation would be required if a total score from a Likert scale was to be used as an interval measure. Other attempts have been made to examine the tendency to respond desirably to attitude-opinion items. These were in response to concerns such as Herzberg's that the "social acceptance" of a response was a factor. Schuessler, Hittle, and Cardascia have developed a scale designed to measure an individual's tendency to "respond desirably" which they contend could be used in conjunction with attitude surveys to determine bias. Common methods of avoiding bias created by possible tendencies to respond favorably are the inclusion of items with opposite meanings but equal social desirability, and the inclusion of items designed to measure an individual's tendency to respond desirably. Related to the problem of individual tendencies to respond with socially acceptable answers, is the problem of getting samples to respond at all. Social scientists have found that subjects often resist what they see as intrusions on their privacy and demands on their time and energy. Responses to this problem have included increased control of experimental situations, attempting to test subjects without their knowledge, and the development
of a relationship with subjects before testing. Clayton Alderfer and Dave Brown have suggested an alternative solution to this problem through the development of "empathetic questionnaires". They ascertained through their research that respondents were more likely to respond to material that could be considered threatening if the questionnaire showed an awareness of critical events in the organization.

Related to these issues of acceptance of the survey and willingness to respond, is the acceptance of a mailed survey. While mailed surveys have been a valuable and economical research tool, they have been subject to difficulty in receipt of sufficient response. Several devices have been recommended as partial solutions to the response problem, including follow-up letters and the use of personal letters of request. However, research by Mary Kawash and Lawrence Aleamoni, with university faculty members, found no significant difference in response when letters were personally signed.

Nonresponse to a survey can create bias, as it is possible that characteristics of the nonrespondents were significantly different from the respondents. This has been empirically examined and verified as a bias problem. In response, formulae have been developed to adjust for nonresponse in sample surveys. While these adjustments
do not remove the problem, they can reduce its bias effects.

This section has examined the legitimate use and inherent problems of measures of perception and attitude. The following section examines the use of these measures for examination of the functioning of institutions of higher education.

**Measures of Institutional Functioning**

Attempts to evaluate universities date back at least to the turn of the century, if not as far back as the development of universities themselves. During the 1970's, research into methods of assessing institutional performance increased rapidly because of the expectation that the results of the studies could be used for management information and planning.\(^{15}\)

One problem which has arisen since the increase in assessment of institutional function is a negative reaction to questionnaires among potential respondents. Research by Glenn Petry determined that university faculties and officials may be approaching a "saturation point" in relation to surveys. As one main function of universities is the collection and dissemination of information, Petry expressed concern that the decision making tool, the survey, not lose its place in institutional research.\(^{16}\)
Alan Lindsay, taking a "managerial perspective" of assessment of higher education said that institutional performance is related primarily to an institution's effectiveness and efficiency in goal attainment. He suggested that current performance methods may not sufficiently measure efficiency, and tend to be too costly in both time and money. He favored the comparative method of institutional studies over self-studies, since comparative studies provide their own relative standards of measurement. These comparative studies, when performed at relatively homogeneous institutions, could examine relative effectiveness and efficiency, and could reduce the costs of institutional research through shared instrumentation and data bases.¹⁷

The facilitation of comparative studies has been contingent upon the development and use of instruments which could provide high degrees of internal and content validity. The Institutional Functioning Inventory, which was developed by the Educational Testing Service (E.T.S.), appears to have met those criteria.

The Institutional Functioning Inventory was developed by a group of Educational Testing Service researchers and a group of professors of Teachers College of Columbia University. The instrument was designed to measure "institutional characteristics that in varying combinations are meaningful throughout the spectrum of American higher
education."18

In 1967, to determine what to include in the instrument, the developers surveyed the president, the dean of students, an associate professor of English, and the editor of the student newspaper at three hundred and seven (307) colleges and universities. No consensus was found among the respondents, but ten areas were isolated as most frequently suggested. Two conferences were held for discussion of these areas and of new ideas and approaches related to institutional evaluation. After the conferences, a list of twelve dimensions of institutional functioning had been decided upon.19

An experimental instrument was developed by the researchers, with each item reviewed by three writers. Seventy-two institutions, chosen to represent a cross section in terms of size, type, and geography, were asked to administer the experimental instrument. Fifty institutions agreed, and an additional seventeen uninvited institutions volunteered to participate, for a total of sixty-seven institutions. Small institutions were asked to distribute the instrument to all faculty. Large institutions were asked to distribute the instrument to random samples of one hundred faculty. Responses were returned by faculty directly to the Educational Testing Service in prepaid envelopes. The average return rates for
the institutions was fifty-eight percent. Using the data obtained by the experimental distribution, items were chosen to maximize internal consistency reliability and empirical independence, leaving one hundred and thirty-two (132) items. One classification of items was eliminated and the remaining items were re-organized into eleven areas. The perceptual approach was chosen, and a format designed which included both factual items and opinion items.

In 1978, the instrument was re-tested at thirty-seven (37) four-year institutions. It was determined that there was redundancy in factors measured by the eleven subscales, but it was decided that conceptual differences were sufficient to retain all of the groupings.

The Educational Testing Service provides a list of studies utilizing the Institutional Functioning Inventory that have been performed from May 1971 to July 1981. Many of these studies have been multicollege studies, often in multicollege university systems. In addition, the Educational Testing Service provides information on the multiuniversity studies performed during the development, norming, and renorming of the Inventory. As the Institutional Functioning Inventory has become an accepted tool for institutional research, independent researchers have examined and evaluated aspects of the instrument. Rodney Hartnett compared the scoring method of the
Institutional Functioning Inventory, which is a basic psychometric method, to the method used by the College and University Environment Scales, which use a consensus weighted technique. He found little difference in results and contended that the method used with the Inventory provided more data for within group and between group analysis.  

John Centra used the Institutional Functioning Inventory to examine the validity of use of multigroup-multiscale matrixes for comparing discrete groups of individuals by use of scale scores. He found that discrete groups responded similarly to the subscales of the Inventory and contended that this indicated that the subscales actually measured conditions of the environment objectively rather than merely providing subjective interpretations.

Of eight published dissertations using the Institutional Functioning Inventory since 1971, seven made their primary focus the comparison of discrete groups, faculty, student, and administrators, and their perceptions of their campuses in comparison to national norms. In six of these studies, significant differences were found between the measured perceptions of the three discrete groups. In addition, Donald Alexander found "within group" differences relating to age, rank, and teaching load in
faculty groups. Julian Schlager found significant differences in responses of faculty by college, and Jerry Young found significant differences in faculty related to advanced degrees. Within group differences were also found to be related to major subject area in student groups.

Accepting the validity of the Institutional Functioning Inventory as a measure of faculty perception of university function, two areas were isolated for particular emphasis. These areas were faculty morale and job satisfaction.

The Study of Morale

Morale is a term for which multiple definitions and interpretations exist. This variance in semantic interpretations has led to controversy involving the use of the term which has not been resolved to date. In this section "morale" will be defined by the operational definitions in the studies and literature discussed.

In Getzels, Lipham, and Campbell's Educational Administration as a Social Process morale is defined as "a feeling of belongingness in a group and identification with the goals of the group." They state that morale provides "the pattern of affect underlying effectiveness, efficiency and satisfaction." In agreement with their point, Owens lists morale as one of ten indicators of organizational
In turn, experts in organizational design claim that morale is determined by the appropriateness of an organization's structure to its goals. Morale, then, may be considered a major factor for examination when studying faculty perceptions of their institutions as it may have a direct bearing on the organizational health of universities.

For the purpose of this research, morale will be measured by the Institutional Espirit subscale of the Institutional Functioning Inventory. Institutional Espirit has been defined by the Educational Testing service as follows:

Institutional Espirit refers to a sense of shared purposes and high morale among faculty and respect for the competency of administrative leaders.

Studies of faculty morale have been quite common in public school systems at the elementary and high school levels. Far fewer studies have been performed in institutions of higher education. There are, however, some studies with findings that bear on the proposed research.

A ten year study was performed by the Institute of Higher Education at Columbia University which surveyed faculty members at ninety-three colleges and universities. The study used financial and statistical profiles, the Institutional Functioning Inventory, and interviews,
surveying 5,100 faculty in 1980-81 and comparing the results to 6,900 from the same institutions in the late 1960's and early 1970's. The Columbia study determined that faculty morale, which had declined in the last ten years, was unrelated to changes in college income or faculty salary; instead they determined that it was faculty member's involvement in governance of their institutions, their commitment to the institution, and their support of the administration that had the greatest effect on their morale. 33

George Strauss found that professors' jobs provide their primary form of need satisfaction and that they place a high value on "autonomy, inner direction, and the quest for maximum self-development." He said that "as much as any other group in society, their existence is work oriented; for them, creative achievement is an end in itself and requires no further justification." 34

Larry Braskamp and Martin Maehr of the University of Illinois have been doing research on faculty motivation by studying high achievement faculty in comparison to high achievers in other vocational areas. Faculty members were found to differ from others in being less power-oriented, less competitive, more service oriented, and more concerned with social issues. They found that faculty enjoyed their work and were very task involved, finding their work exciting and challenging. Faculty in their study reported
that they enjoyed teaching as much, if not more, than research.35

Verna McDonald found age to be a significant factor in measuring the social attitudes of faculty.36 This agrees with several Institutional Functioning Inventory studies in which age was a significant factor. Wayne Harris also found age to be a significant morale variable using the Purdue Teacher Opinionnaire. Additionally, he found female faculty to have significantly higher morale scores than male faculty.37 Dewey Sanders also found this sex related significance using Richardson's Faculty Attitude Survey. He found that internal security and communication were the factors that best related to morale level.38 Arthur Gloster found morale level to be related to highest degree earned, previous teaching experience, teaching in area of training, and the chief administrator's philosophy and accessibility.39

Using the University Faculty Questionnaire, Charles Wells found that faculty attitudes toward morale were directly related to their perceptions of the level of faculty involvement in university policy formulation.40 He also found that sex, salary level, current position, and formal educational training were significant in relation to faculty levels of morale.41 These findings were in agreement with the findings of the Columbia study and
Kenneth Rager found no correlation in the level of morale in universities using merit or non-merit systems of evaluation, and no correlation between level of faculty morale and the extent of agreement with their department chairmen in respect to evaluation. This provides contrast with the findings of David Powers that a significant negative relationship exists between faculty and department chairmen perceptions of leader behavior. Like Sanders, however, Rager determined that security was a significant affect factor toward morale, and like McDonald, he found age to be a significant factor.

Frederick Hasle compared differences in morale between unionized and non-unionized faculties in community colleges. He found no significant difference between union and non-union faculties on the factor of morale, as measured by the Purdue Teacher Opinionaire.

Closely related to the area of morale, the concepts of job satisfaction as they relate to higher education are examined in the following section. Again, this is a factor considered important in relation to this research due to its relationship with perception as established in the theoretical section of Chapter One.

Job Satisfaction in Higher Education

While studies of morale examine internal perceptions
which may or may not be job related, (measures of the person in the job), studies of job satisfaction examine external perceptions, (measures of the job by the person). The differences are, however, not always evident. Locke and his associates said that while there have been many studies of job satisfaction, there have been such conflicting findings that the relationships of satisfactions to other variables are far from clear. Their study found that the "direct graphic" method of surveying, similar to the method used in this study, had the greatest level of discriminant validity for measurement of job satisfaction. 46

A look at the faculty career as a developmental process found that "experienced faculty gradually become more comfortable with the teaching role and more adept at service to their institution" such as governance, policy formulation, and committee work. 47 Studies have shown that research interests decline during an academic career, and that faculty gradually become more independent. 48 This information becomes relevant as vacancies in higher education are reduced and there is a static, maturing professoriate. It is predicted that the median age of faculty members, which was thirty-nine in 1970, will increase to forty-eight by 1990. 49 For some time it seems that the majority of faculty will be those who were "liberalized or radicalized" by the events and climate of
the 1960's and 1970's. The Ladd-Lipset survey, performed in 1975, found "a steady progression from left to right with increased age." As the older faculty members retire, the now young will represent the majority, especially since with no growth few younger professors will be joining the cohort. This new majority of professors are expected to become increasingly conservative as they age, and are expected to reflect different attitudes and perceptions than those measured today.

The most common view of commitment in organizations has to do with an individual's psychological bond to the organization. Buchanan says commitment is an additive function of organizational identification, job involvement, and organizational loyalty. Porter and his associates say that it is an additive function of desire to remain a member of the organization, willingness to exert high effort for the organization, and belief in the values and goals of an organization. Salancik observes that the two factors most reliably associated with commitment to a job are position in the organization and tenure. Job satisfaction, then, may come from internal responses as much as from external observation of an organization.

Most researchers agree that intrinsic-need satisfaction is directly related to job involvement and job satisfaction. In a study of faculty at community
colleges with National Education Association (N.E.A) affiliation, American Federation of Teachers (A.F.T.) affiliation, or no collective organization, Bensyl found that needs perceived as important to job satisfaction varied. N.E.A. affiliated faculty rated "security" as most important, while A.F.T. affiliates put the least stress on "self-actualization." All faculty put the same rate of importance on social, esteem, and autonomy need gratification.56

Eric Erikson proposed the concept that career development takes place within the context of psychosocial development with several stages of what he terms ego growth. In relation to these, other research has shown that ego identity is related to confidence or commitment in vocational choice and that individuals with a high degree of ego identity are most able to make vocational choices and commitments.57

Vroom's expectancy theory, which proposes two expectations: that effort will lead to good job performance and that good performance will lead to rewards, has stimulated several studies of "locus of control". The concept of locus of control is that some people attribute cause and control of events to themselves while others attribute them to the external environment. Research has shown that people who believe in internal control, who in turn would hold Vroom's expectations tend to make better

progress in their jobs and show higher job satisfaction. It has also been shown that these "internal cause" individuals prefer participative to directive management while "externals" prefer directive management. It must be noted, however, that the literature on the relationships between perceived job characteristics and locus of control is inconsistent and inconclusive. 58

Also related to Vroom's expectancy theory was a study designed to investigate the relative impact of some of the specific characteristics of academic jobs. This study by Howard and Hammer examined seven factors which might influence mid-career change from teaching to administration among professors and department chairmen at a large northeastern university. They found that department chairmen and career changers were similar in their desire for power and formal authority, and these desires were much stronger than for professors with no desire for administrative positions. It appeared that all respondents agreed that administrators had less autonomy and therefore those with strong autonomy needs preferred to stay in teaching and research jobs. 59

Summary

Chapter Two has provided a review of literature and research pertaining to four issues relevant to this dissertation, Measures of Perception and Attitude, Measures
of Institutional Functioning, Morale, and Job Satisfaction in Higher Education. The intention has been to clarify any limitations or concerns related to the nature of the research, and to provide supplementary information related to the hypotheses of the research.

The section entitled, "Measures of Perception and Attitude" demonstrated the validity of perceptual or attitude subjective measurements and the use of instruments such as the Institutional Functioning Inventory for such measurement. The use of a successive integer scale, a Likert scale, was examined and found to be justified.

Problems with tendencies of respondents to make socially desirable choices, and the problems related to nonresponse were examined in this chapter. Either of these factors could affect a study of this nature.

Measures of Institutional Functioning were examined as a management tool. It was suggested that comparative multiuniversity studies, which was the research design employed in this dissertation, provide the most economical and effective method of institutional study. The Institutional Functioning Inventory was examined as a valid and tested tool for use in comparative institutional research.

Previous studies employing the Institutional Functioning Inventory have found differences in responses
of various discrete groups. These differences have related to status, age, rank, teaching load, college affiliation, and education.

Faculty Morale and Job Satisfaction were discussed in Chapter Two because of their close relationship to the theoretical concepts on which the hypotheses were based. It was stated that morale can be used as an indicator of institutional health and therefore can provide vital information in institutional analysis. A major nationwide study by Columbia University determined that faculty morale has declined in the last ten years, and that the most significant variable affecting morale was the amount of involvement faculty members had in governance of their institutions. Additional studies have supported this finding.

Using various measures of university faculty morale, several additional variables have shown significance in recent research. These variables which can affect morale are age, sex, internal security, communication, education, and experience.

Morale was examined as a measure of individual internal perceptions, Job Satisfaction was examined as a measure of external perceptions. It has been determined that the nature of the professoriate has changed and is changing due to changing patterns of growth. The professoriate is becoming increasingly static and is, therefore, aging. It
has been suggested that these changes may be reflected in measures of current faculty perceptions of their institutions. Job Satisfaction and expectancy were discussed as factors relevant to the decisions which individual faculty make in evaluating their work environment and establishing their perceptions.

Chapter Two established the legitimacy of attitude measurement and the chosen measurement instrument, and provided discussion of variables found to be significant in institutional functioning perceptual studies. Chapter Three will provide the design of this research project.
NOTES FOR CHAPTER TWO


2Ibid., p. 666.


4Matell and Jacoby, op. cit., pp. 506.

5Ibid., p. 508.


9Ibid., pp. 224-235.


11Ibid., pp. 456-460.


16 Glenn H. Petry, "Questionnaires: Burden or Benefit to Universities?", *College and University*, 52 (1976), pp. 71-78.

17 Lindsay, *op. cit.*., pp. 687-706.


19 Ibid.

20 Ibid.

21 Ibid.

22 Ibid.


27 Julian M. Shlager, The *Characteristics of the Faculty, Administrators, and Students at Nine Massachusetts...

Alexander, op. cit.


Peterson, op. cit.


Arthur S. Gloster, A Study of Morale in Selected
Community Colleges and Technical Institutes in North Carolina, (Doctoral dissertation, Virginia Polytechnic Institute and State University, 1974).

40Charlie Wells, An Investigation of the Relationship Between Faculty Involvement in Policy Formulation and Faculty Morale, (Doctoral dissertation, Virginia Polytechnic Institute and State University, 1976).

41Ibid.


43David Durfee Powers, The Relationships Between Faculty Morale and Perceived Leader Behavior of Department Chairmen at a Florida Metropolitan Community College, (Doctoral dissertation, University of Miami, 1973.)

44Rager, op. cit.

45Frederick G. Hasle, An Assessment of Differences in Morale Between and Among Selected Union and Non-Union Community College Faculty, (Doctoral dissertation, Oregon State University, 1978).


50Ibid.

51Gerald Salancik, and Barry Staw, New Directions in Organizational Behavior, (St. Clair Press, 1977).

53 Salancik and Staw, op. cit.

54 Ibid.


60 Magarrell, op. cit., pp. 1, 28.
CHAPTER THREE

Methodology

Chapter Three provides information on the population and sample, and describes the sampling method and data gathering procedures. It also explains the design, how the variables were measured, and the statistical analyses that were performed.

Population and Sample

The population to which this study sought to generalize was the faculties of a class of public institutions which have similar missions and other organizational and student characteristics that would place them within a class of major research and teaching universities in the United States.

The sample chosen for this study consisted of randomly selected faculty from the six universities. The institutions in the sample were matched on characteristics such as enrollment, level of offering, control, and student/faculty ratio.

The universities were selected because of their similarities to the University of Hawaii at Manoa, by using the 1982 revision of the Chronicle Four-Year College Databook and the 1979 Peterson's Annual Guide to
Undergraduate Study. All of the institutions selected are state controlled, coeducational, urban universities. The additional factors examined for matching were total enrollment, undergraduate and graduate enrollments, faculty size, tuition and fees, admission selectivity, and the presence of faculty collective bargaining.

Sampling Method

A stratified random sample of faculties was drawn from the population. The Educational Testing service reported a fifty to ninety percent return on previous administrations of the Institutional Functioning Inventory. Stratification was used to increase the probability that a statistically reliable sample would be obtained even if the return was in the lower tail of the percentages reported for other studies of this nature.

The sizes of samples from the six university faculties were determined by a formula designed to designate random sample sizes required to estimate population means within a given range of error. A range of error was chosen which would provide a ninety-seven point five percent (97.5) confidence interval. This high confidence interval was chosen to account for the possibility of a small return. It was estimated that this oversampling would assure the ninety-five percent confidence interval desired by the researcher. The sample determination process, from William
Mendenhall, Lyman Ott, and Richard Scheaffer's *Elementary Survey Sampling*, is explained below.

First, population sizes were determined using reported faculty sizes from the *1979 Peterson's Annual Guide to Undergraduate Study.* As the number of faculties was unequal, the sample from each university was calculated separately to improve accuracy. The following formula was used to determine the sample sizes required to estimate the population means.4

\[
N = \text{population} \\
n = \text{sample size} \\
\sigma^2 = \text{population variance squared}^* \\
D = \text{Bound on the error of estimation (B) squared} \\
\]

\[
n = \frac{N\sigma^2}{(N-1)D+\sigma^2} \quad D = \frac{B^2}{4}
\]

*As the population variance, \(\sigma^2\), was unknown, but sample variance, \(s^2\), was available from the Educational Testing service experiences, approximate sample size was determined by replacing \(\sigma^2\) with \(s^2\).

The sample sizes derived from the formula were:

- University of Hawaii at Manoa, \(n = 153\)
- University of Oklahoma, \(n = 140\)
- Florida State University, \(n = 149\)
- University of Colorado, \(n = 151\)
- University of Connecticut, \(n = 149\)
- Washington State University, \(n = 151\).

The sample size formula determined samples necessary for estimating population means using simple random
sampling. Stratification was done to assure that the sample sizes would be adequate to generalize to the populations even if a return of less than fifty percent was obtained, and also to meet sufficient subpopulation needs for the second hypothesis and the ancillary questions.

Stratified random samples were selected from the college faculty lists of the six university directories, and a table of random numbers.\(^5\) Each sample was chosen to represent proportionally the number of faculty within each college of a university so that there would be a good fit between each sample and its parent population.

**Data Gathering Procedures**

In May of 1982, surveys and answer sheets were mailed directly to each faculty member in the sample. A letter of invitation to participate (see Appendix A), and a stamped return envelope were enclosed. In addition, each person was sent a form to indicate whether they wished to receive a copy of the final abstract, and a token of appreciation was included. The covering letter included an assurance that anonymity was guaranteed as there was no way to identify the responses of a particular faculty member.

Two weeks after the first mailing a follow-up letter was sent to the University of Hawaii sample. This was done as a reaction to concern that a sufficient response was not being received (see Appendix B). A follow-up letter was
also sent to the faculty of the University of Colorado one month after the initial mailing when it appeared that returns from that campus might be insufficient (see Appendix C). Follow-up letters were not sent to the remaining campuses since the initial mailing appeared to be producing enough responses to assure a sufficient sample to meet the desired error and confidence limits.

The answer sheets were hand-scored using cut stencils. Data were recorded manually and input into the University of Hawaii at Manoa Computer Center through a remote terminal in the College of Education.

**Instrumentation**

The *Institutional Functioning Inventory* (I.F.I.) which was developed by the Educational Testing Service was chosen as the measurement instrument for this study (see Appendix D). The inventory was designed for use in institutional self studies, as well as for multiuniversity research studies. The I.F.I. contains eleven subscales which provide a profile of faculty perception of the degree to which the university is satisfactorily performing or functioning in each of the areas. The subscales were examined individually. They are:

- Intellectual-Aesthetic Extracurriculum
- Freedom
- Human Diversity
- Concern for Improvement of Society
- Concern for Undergraduate Learning
Democratic Governance
Meeting Local Needs
Self-Study and Planning
Concern for Advancing Knowledge
Concern for Innovation
Institutional Esprit.
(See Appendix E for subscale definitions).

There are one hundred and thirty-two (132) multiple choice items in the inventory, forty-seven (47) are factual and eighty-five (85) ask for perceptions. It was estimated that the respondents would be able to read the letters and the instructions, and complete the survey in twenty (20) to thirty (30) minutes.

The answer sheet for the I.F.I. contains six information items (see Appendix F). These items identify role, field, age, teaching load, years at the college, and academic rank. In addition, space is provided for the researcher to request group identification and to insert up to ten additional questions of his own selection. Each university was assigned a group number and the faculty were identified by that code. The assignments were:

(1) Faculty of University of Hawaii-Manoa
(2) Faculty of University of Colorado
(3) Faculty of Florida State University
(4) Faculty of University of Connecticut
(5) Faculty of Washington State University
(6) Faculty of University of Oklahoma

The additional questions which were inserted were used to ask the specific college affiliation, and whether the faculty member spent the largest portion of time on undergraduate teaching, graduate teaching, or research.
Respondents were also asked how much of their graduate and undergraduate education was received at the institution with which they are affiliated.

The reliability and validity of the I.F.I. have been established by the Educational Testing Service. The I.F.I. was pre-tested in February 1968 in sixty-seven (67) institutions which were selected to represent a cross section in terms of size, type, geography, and expectations of high or low responses to the scales. The form was re-tested in 1978 in thirty-seven (37) institutions, and new norms were established. Reliability and validity were reaffirmed at that time.7

As the I.F.I. is a group measure, reliability is approached in terms of group response. The internal consistency reliability for the I.F.I. are coefficient alphas based on group means (see Table 1).8

Table 1 also indicates the standard error of measurement for each of the scales. The scales vary in internal consistency, but even for the scale that had the lowest, an "obtained institutional mean can be expected to lie within .98 of a score point from the "true" mean about 95 percent of the time, if the distribution of scale means is assumed to be normal."9 Therefore, it was unlikely that the obtained means for each subscale would differ significantly from their "true" means.

To test the construct validity of the I.F.I. its scales
were correlated with three types of information:

1. relevant published institutional data
2. student perceptions of their college environment
3. a national study of student protest.

The findings of these correlations supported the validity of the instrument.

Table 1

The Coefficient Alpha Reliabilities, Means, Standard Deviations, and Standard Errors of Measurement on the Institutional Functioning Inventory (based on faculty means at thirty-seven (37) institutions)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficient Alphas</th>
<th>Mean</th>
<th>S.D.</th>
<th>SE Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAE</td>
<td>.88</td>
<td>8.49</td>
<td>2.11</td>
<td>.73</td>
</tr>
<tr>
<td>F</td>
<td>.90</td>
<td>9.05</td>
<td>1.49</td>
<td>.47</td>
</tr>
<tr>
<td>HD</td>
<td>.90</td>
<td>7.11</td>
<td>1.80</td>
<td>.57</td>
</tr>
<tr>
<td>IS</td>
<td>.95</td>
<td>6.75</td>
<td>2.39</td>
<td>.54</td>
</tr>
<tr>
<td>UL</td>
<td>.92</td>
<td>8.18</td>
<td>1.78</td>
<td>.50</td>
</tr>
<tr>
<td>DG</td>
<td>.96</td>
<td>6.99</td>
<td>1.77</td>
<td>.35</td>
</tr>
<tr>
<td>MLN</td>
<td>.92</td>
<td>6.86</td>
<td>2.25</td>
<td>.64</td>
</tr>
<tr>
<td>SP</td>
<td>.86</td>
<td>7.33</td>
<td>1.32</td>
<td>.49</td>
</tr>
<tr>
<td>AK</td>
<td>.96</td>
<td>4.50</td>
<td>2.74</td>
<td>.55</td>
</tr>
<tr>
<td>CI</td>
<td>.92</td>
<td>7.95</td>
<td>1.46</td>
<td>.41</td>
</tr>
<tr>
<td>IE</td>
<td>.92</td>
<td>8.51</td>
<td>1.28</td>
<td>.36</td>
</tr>
</tbody>
</table>

In addition, the scores were analyzed with a multigroup-multiscale matrix and validity was again supported. This validation compared groups to determine the extent to which agreement would be obtained in response to the subscales. It was found that students interpret certain scales differently from adult groups, however, since students were not included in this study, the
difference did not present a problem.

**Design of Study**

This study utilized an ex post facto co-relational design. Sets of data were gathered from the samples who represented the faculty from the six universities.

Two hypotheses were proposed concerning the relationships expected to be determined from this design. Hypothesis One examined whether significant differences existed between subscale scores of faculty groups from the various universities. For this hypothesis, the independent variables were:

- University of Hawaii at Manoa
- Washington State University
- Florida State University
- University of Connecticut
- University of Colorado
- University of Oklahoma.

The dependent variables for Hypothesis One were the scores on each of the eleven subscales of the *Institutional Functioning Inventory*.

Hypothesis Two examined whether significant differences existed between subscale scores of faculty groups with similar characteristics. The independent variables for this hypothesis were:

- Field of Affiliation
- Age
- Years of Service at That University
- Workload
- Academic Rank.
The dependent variables for Hypothesis Two were the scores on each of the eleven subscales of the Institutional Functioning Inventory.

Ancillary Question One examined the relationships among independent predictor variables including field of affiliation, age, workload, academic rank, and years of service to subscale scores. The subscale scores were examined individually as dependent variables.

The second Ancillary question tested for differences among variables that were identified with the local option questions. The relationships were examined between the independent variables, which were specific college affiliation, nature of major assignment, and affiliation with a university of own matriculation, and the dependent variables, the subscale scores.

**Statistical Analysis**

All statistical tests were performed using the SPSS: Statistical Package for the Social Sciences. Data was input through a remote terminal at the College of Education to the University of Hawaii Computer Center, and testing was done through direct computer access and through remote analysis using the Timesharing Option.

The ninety-five percent confidence level (p ≤ .05) was chosen as the level at which the null hypotheses could be rejected.
Hypotheses One compared subscale scores of the sample universities. This hypothesis was tested using Oneway Analysis of Variance. The Scheffe Contrast test was used to provide a post hoc comparison of all possible pairs of group means to identify specific universities which may have shown significant variance from the others.

Oneway Analysis of Variance with a Scheffe Contrast Test was used to test Hypothesis Two. This hypothesis compared subscale scores of sample groups with various common characteristics.

The formulae used by SPSS in performing Analysis of Variance, adjusted for unequal n's, is given below. This is a multi-step process based on the assumption that the populations were normal and had equal variances, and that they were independent.\(^\text{13}\)

The basis for analysis of variance is the decomposition of variation or sums of squares corrected for the mean (SS).

\[
Y = \text{dependent variable} \\
\bar{Y} = \text{mean of } Y \text{ over the whole sample} \\
\bar{Y}_j = \text{mean of } Y \text{ in category } j \\
A = \text{independent variable} \\
SS_Y = \text{total sum of squares in } Y \\
N_j = \text{number of cases in category } j
\]

\[
SS_Y = SS_{\text{between}} + SS_{\text{within}}
\]

where

\[
SS_Y = \sum \sum (Y_{ji} - \bar{Y})^2
\]

\[
SS_{\text{between}} = \sum N_j (\bar{Y}_j - \bar{Y})^2
\]

\[
SS_{\text{within}} = \sum \sum (Y_{ji} - \bar{Y}_j)^2
\]
\[ SS_y = SS_A = SS_{error} \]

The appropriate F ratio for testing the significance of each component is given by

\[ F = \frac{SS_{for \ that \ component}/df_1}{SS_{error}/df_2} = \frac{MS_{for \ that \ component}}{MS_{error}} \]

with appropriate degrees of freedom.

The Scheffe is an a posteriori contrast test for comparing all possible linear combinations of group means. The Scheffe uses a single range value for all comparisons, and is exact, even for unequal group sizes. As SPSS explains, "The groups are divided into homogeneous subsets, where the difference in the means of any two groups in a subset is not significant at some prescribed level." The procedure is based on the test

\[ |\bar{x}_i - \bar{x}_j| < R(alpha, g, f) \times S_x \]

where \( R(alpha, g, f) \) is a range based on a significance level (alpha), the number of groups in the subset (g), and the degrees of freedom (f) in the between groups sum of squares. \( S_x \) is the standard error in the combined subset.

Multiple Regression Analysis was used to test Ancillary Question One to determine if any of the independent predictor variables or combinations of variables contributed significantly to variance in the scores. These tests examined interaction of the
independent variables as well. It was necessary to assign dummy interval identifiers to the nominal independent variables.

The formulae used by SPSS to perform the Regression Analysis are

Values of the dependent variable were predicted from a linear function of the form

\[ Y' = A + BX \]

where \( Y' \) is the estimated value for the dependent variable \( Y \), \( B \) is a constant by which all values of the independent variable \( X \) are multiplied, and \( A \) is a constant which is added to each case.\(^{16}\)

Residuals represent the difference between the actual and the estimated values of \( Y \) for each case. "The Regression strategy involves the selection of \( A \) and \( B \) in such a way that the sum of the squared residuals is smaller than any possible alternative values."\(^{17}\) The optimum values for \( B \) and \( A \) are obtained from the formulae below.

\[ B = \frac{\sum (X-X)^{(Y-Y)} \cdot \sum (X-X)^{2}}{\sum (X-X)^{2}} \]

\[ A = \bar{Y} - BX \]

where \( SP_{X,Y} \) is the symbolic notation for the sum of the cross products of \( X \) and \( Y \), and \( SS_{X} \) denotes the sum of the squares of \( X \).\(^{18}\)

Oneway Analysis of Variance was used to answer Ancillary Question Two. This was to determine if significant relationships existed between subscale scores and the three measured variables.
Summary

Chapter Three described the methodology used in performing the research study. The population and sample were described, the sample method was explained, and the data gathering procedures were given. This chapter also provided the design of the study, explained how the variables were measured, and detailed the statistical tests which were performed.

The samples were stratified random groups of faculty of six universities. The populations from which the samples were chosen were the faculties of six universities which had been matched for organizational and support characteristics.

Sample sizes were determined by a formula designed to choose samples which estimate population means, and which provided a confidence level of $p \leq 0.025$. To decrease the possibility of sampling error, the formula chosen was designed for simple random sampling but stratified random sampling was performed. Faculty representation in various colleges of a university was matched proportionately in the stratified sample.

Data were gathered through use of a mailed survey. Sample members were sent explanatory letters assuring anonymity and stamped return envelopes.

The Institutional Functioning Inventory, which was developed by the Educational Testing Service, was used as
the instrument for this survey. This test, which contains eleven subscales, measures both factual information and perceptions concerning postsecondary educational institutions. Additional information was obtained on the answer sheet for examination of variables which might have linear relationships to the subscale scores.

The design of the study can be described as ex post facto correlational. The data was used to examine hypotheses which concerned possible relationships between the responses of faculty groups from individual universities, and between respondents grouped by demographic characteristics.

Scoring of answer sheets and recording of data were manually performed. All statistical tests were performed using SPSS: Statistical Package for the Social Sciences.

The two hypotheses were tested using Oneway Analysis of Variance with the Scheffe a posteriori test. Multiple Regression Analysis was used to address Ancillary Question One and Oneway Analysis of Variance was used to examine the second ancillary question.
NOTES FOR CHAPTER THREE


3 Hegener, *op. cit.*


8 Peterson, *op. cit.*

9 Peterson, *op. cit.*


18 Ibid.
20 Nie, op. cit.
CHAPTER FOUR

Findings

The findings of the statistical analysis performed on the data collected for this research are presented in Chapter Four. The characteristics of the respondent samples were examined, and their acceptability as representations of the population was evaluated. Findings for each hypothesis and the ancillary questions were provided, with tables showing results of the statistical analysis.

Descriptive Statistics

The universities chosen for this research were matched for various characteristics relating to control, purpose, and size. Table 2 shows the comparative data on which the choices were based. These data were found in the Chronicle Four-Year College Databook and the 1979 Peterson's Guide to Undergraduate Study.¹

Three hundred and forty-nine (349) usable responses were received. Using a table and formula designed to provide the confidence intervals for response rates, it was determined that the responses were sufficient to provide a confidence interval at the ninety-five percent level.²
Table 2

The Ten Characteristics Used to Match the Comparative Data on Six Universities Selected for the Study

<table>
<thead>
<tr>
<th>Institution</th>
<th>Level of Offering</th>
<th>Level of Control</th>
<th>Students</th>
<th>Setting</th>
<th>Fall 1981 Total Enrollment</th>
<th>Fall 1981 Undergraduate Enrollment</th>
<th>Fall 1981 Graduate Enrollment</th>
<th>Fall 1977 Faculty Size</th>
<th>1982 Tuition and Fees in Dollars</th>
<th>Faculty Bargaining</th>
<th>Admissions Selectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Oklahoma</td>
<td>Univ. Univ.</td>
<td>State</td>
<td>Coed</td>
<td>Urban</td>
<td>21,850</td>
<td>17,192</td>
<td>.79</td>
<td>4658</td>
<td>796 1-25</td>
<td>No</td>
<td>Trad.</td>
</tr>
<tr>
<td>University of Colorado</td>
<td>Univ. Univ.</td>
<td>State</td>
<td>Coed</td>
<td>Urban</td>
<td>21,767</td>
<td>17,729</td>
<td>.83</td>
<td>4038</td>
<td>1320 1-16</td>
<td>Trad.</td>
<td></td>
</tr>
<tr>
<td>University of Hawaii-Manoa</td>
<td>Univ. Univ.</td>
<td>State</td>
<td>Coed</td>
<td>Urban</td>
<td>20,543</td>
<td>14,888</td>
<td>.72</td>
<td>5655</td>
<td>1505 1-14</td>
<td>Yes</td>
<td>Trad.</td>
</tr>
<tr>
<td>Washington State University</td>
<td>Univ. Univ.</td>
<td>State</td>
<td>Coed</td>
<td>Urban</td>
<td>19,048</td>
<td>14,193</td>
<td>.82</td>
<td>2855</td>
<td>1375 1-12</td>
<td>Trad.</td>
<td></td>
</tr>
<tr>
<td>Florida State University</td>
<td>Univ. State</td>
<td>State</td>
<td>Coed</td>
<td>Urban</td>
<td>21,258</td>
<td>16,972</td>
<td>.80</td>
<td>4286</td>
<td>1200 1-18</td>
<td>Yes</td>
<td>Selct</td>
</tr>
<tr>
<td>University of Connecticut</td>
<td>Univ. State</td>
<td>State</td>
<td>Coed</td>
<td>Town</td>
<td>21,777</td>
<td>15,721</td>
<td>.72</td>
<td>6056</td>
<td>1200 1-18</td>
<td>Yes</td>
<td>Selct</td>
</tr>
</tbody>
</table>
Definitions for Table 2

**Level of Offering:** Univ. - a university that offers four years of undergraduate work plus graduate degrees through the doctorate in more than two research-oriented and professional fields.

**Control:** State - refers to state control, (in contrast with city, county, federal, or independent)

**Students:** Coed - open to both male and female students

**Setting:** Metro - metropolitan, community population over 100,000
Urban - urban, community population between 20,000 and 100,000

**Calendar:** S - semester system
Q - quarter system
T - trimester system

**Enrollments:** Actual, not full time equivalent, combined full and part time students enrolled Fall 1981

**Faculty size:** Actual, not full time equivalent, number of active faculty members teaching full and part time

**Tuition and Fees:** Resident and Nonresident tuition and fees 1982

**Faculty Collective Bargaining:** Yes - faculty bargaining exists
No - no faculty bargaining

**Admission selectivity:** Select - Selective, majority in top 25% of class selected
Trad - Traditional, all in top 50% of class selected
Lib - Liberal, some students from lower half of class selected
As the confidence interval established as desirable by the researcher was ninety-five percent, the samples have been determined to be adequate to generalize from this research. The Homogeneity of Variance of the groups in the sample was tested using The Cochran's C and was found to be within an acceptable range.

A Frequency distribution was performed, using SPSS to examine eleven characteristics of the sample which were identified through questions on the answer sheet of the survey and questions added by the researcher. Frequencies on these characteristics were run on the six faculty groups combined as one sample, and on each group individually. Eleven characteristics were identified through questions on the answer sheet of the survey and supplemental questions added by the researcher. The results of this examination are described below, with accompanying tables showing results by numbers and percentages of the sample as a whole.

One of the characteristics which described the sample was the position held in the university by each respondent. Ninety percent of respondents reported themselves as faculty members while seven percent classified themselves as administrators, and two percent as "other non-students."

Respondents were also asked to identify their academic rank. The largest number of respondents, one hundred and forty (forty-three percent), identified themselves as full
Professors. Seventy-two of the respondents (twenty-nine percent) were Associate Professors, and ninety-three respondents were (twenty-two percent) Assistant Professors. The academic rank distribution is shown in Table 3.

<table>
<thead>
<tr>
<th>Academic Rank</th>
<th>Count</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor</td>
<td>16</td>
<td>.05</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>72</td>
<td>.22</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>93</td>
<td>.29</td>
</tr>
<tr>
<td>Professor</td>
<td>140</td>
<td>.43</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>.02</td>
</tr>
</tbody>
</table>

The respondent's field of affiliation was identified on the answer sheet by marking of one of nine options or "other". Of the nine options, seven could fall within the colleges of Arts and Sciences. The field affiliations identified by this item are shown on Table 4. In order to obtain more specific information, the researcher provided local option questions giving thirteen colleges with which a respondent might be affiliated.

Not all of the universities surveyed have colleges with the same designations. For example, only two of the universities have Colleges of Law and only four have Colleges of Medicine. This does not mean that courses in
these areas are not offered, only that they are not organized into colleges at some universities. Table 5 shows the percentages of respondents that listed their affiliation with various colleges within their universities.

Table 4
The Academic Field of the Respondents by Frequency and Percentage of the Total

<table>
<thead>
<tr>
<th>Academic Field</th>
<th>Frequency Count</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>56</td>
<td>.16</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>32</td>
<td>.09</td>
</tr>
<tr>
<td>Mathematics</td>
<td>8</td>
<td>.02</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>60</td>
<td>.17</td>
</tr>
<tr>
<td>Humanities</td>
<td>34</td>
<td>.10</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>25</td>
<td>.07</td>
</tr>
<tr>
<td>Education</td>
<td>34</td>
<td>.10</td>
</tr>
<tr>
<td>Business</td>
<td>14</td>
<td>.04</td>
</tr>
<tr>
<td>Engineering</td>
<td>27</td>
<td>.08</td>
</tr>
<tr>
<td>Other</td>
<td>59</td>
<td>.17</td>
</tr>
</tbody>
</table>

Table 5
The College Affiliation of the Respondents by Frequency and Percentage of the Total

<table>
<thead>
<tr>
<th>College Affiliation</th>
<th>Count</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Sciences</td>
<td>.164</td>
<td>.48</td>
</tr>
<tr>
<td>Business</td>
<td>20</td>
<td>.06</td>
</tr>
<tr>
<td>Continuing Education</td>
<td>1</td>
<td>.00*</td>
</tr>
<tr>
<td>Education</td>
<td>35</td>
<td>.10</td>
</tr>
<tr>
<td>Engineering</td>
<td>27</td>
<td>.08</td>
</tr>
<tr>
<td>Agriculture</td>
<td>30</td>
<td>.09</td>
</tr>
<tr>
<td>Medicine</td>
<td>12</td>
<td>.03</td>
</tr>
<tr>
<td>Nursing</td>
<td>10</td>
<td>.03</td>
</tr>
<tr>
<td>Architecture</td>
<td>30</td>
<td>.02</td>
</tr>
<tr>
<td>Library Studies</td>
<td>1</td>
<td>.00*</td>
</tr>
<tr>
<td>Law</td>
<td>6</td>
<td>.02</td>
</tr>
<tr>
<td>Marine</td>
<td>4</td>
<td>.01</td>
</tr>
<tr>
<td>Other</td>
<td>26</td>
<td>.08</td>
</tr>
</tbody>
</table>

*Continuing Education and Library Studies had returns equal to .0028.
The faculty were asked to indicate the number of years that they had been affiliated with their institution. Almost half, one hundred and fifty-nine, had been at their universities for twelve or more years. The next largest category was three to six years, with seventy-one responses. Fifty-six respondents indicated that they had been at their universities for seven to twelve years, the remaining thirty-eight had been affiliated with their universities for two years or less. The number of years of affiliation of the respondents with their universities is shown in Table 6.

Table 6

<table>
<thead>
<tr>
<th>Range of Years</th>
<th>Count</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1</td>
<td>14</td>
<td>.04</td>
</tr>
<tr>
<td>1 or 2</td>
<td>24</td>
<td>.07</td>
</tr>
<tr>
<td>3 to 6</td>
<td>71</td>
<td>.22</td>
</tr>
<tr>
<td>7 to 12</td>
<td>56</td>
<td>.17</td>
</tr>
<tr>
<td>More than 12</td>
<td>159</td>
<td>.49</td>
</tr>
</tbody>
</table>

Respondents were asked to indicate their age within one of five range categories. The majority of respondents were between thirty and fifty-nine in age: one hundred and three between thirty and thirty-nine (31 percent), one hundred and eight between forty and forty-nine (32 percent), and seventy-five (23 percent) between fifty and
fifty-nine. Forty respondents were sixty or older, and seven were under thirty years of age. There were sixteen respondents who did not reply to the age question, representing almost five percent of the sample. The response is still sufficient, however, to provide the ninety-five percent confidence interval on data analysis using age as a variable. The frequencies of the age ranges are shown on Table 7.

Table 7

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency Count</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 30</td>
<td>7</td>
<td>.02</td>
</tr>
<tr>
<td>30 to 39</td>
<td>103</td>
<td>.31</td>
</tr>
<tr>
<td>40 to 49</td>
<td>108</td>
<td>.32</td>
</tr>
<tr>
<td>50 to 59</td>
<td>75</td>
<td>.23</td>
</tr>
<tr>
<td>60 or Over</td>
<td>40</td>
<td>.12</td>
</tr>
</tbody>
</table>

Respondents were asked to indicate their credit hour teaching or course load for the semester during which they completed the survey. The largest number of responses, one hundred and eight, was in the category "four to six". It appears, that the majority of respondents teach nine credit hours or less, with fourteen percent teaching more than nine hours. the credit hour distribution of respondents is shown on Table 8.
Table 8

The Teaching Credit Hours of the Respondents by Frequency and by Percentage of the Total

<table>
<thead>
<tr>
<th>Credit Hour Range</th>
<th>Frequency Count</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 or Fewer</td>
<td>86</td>
<td>.27</td>
</tr>
<tr>
<td>4 to 6</td>
<td>108</td>
<td>.34</td>
</tr>
<tr>
<td>7 to 9</td>
<td>76</td>
<td>.24</td>
</tr>
<tr>
<td>10 to 12</td>
<td>35</td>
<td>.11</td>
</tr>
<tr>
<td>13 or More</td>
<td>10</td>
<td>.03</td>
</tr>
</tbody>
</table>

Respondents were asked to indicate if they had received a proportion of their undergraduate or graduate study at the university with which they were affiliated. It was found that a large majority of the respondents had received no education at the universities in which they were presently employed. Two hundred and ninety-four respondents (eighty-four percent) had no undergraduate study at their university of affiliation, three hundred and five (eighty-eight percent) had no graduate study there. Thirty-five respondents (ten percent) had received more than half of their graduate or undergraduate work at their affiliate university.

A Chi Square Test of Statistical Significance was performed to compare the descriptive statistics of the faculty of the six universities. Significant differences
were found in only two areas, Academic Rank and Years of Service at That University. The differences in Academic Rank were related to variance in the category Assistant Professor, which ranged from a count of six at the University of Colorado to twenty-two at the University of Oklahoma. The differences in Years of Service were related to the extremes of the ranges, respondents who had been at their universities less than two years or over thirteen years. Respondents with less than two years of service ranged from none at three universities to ten at the University of Oklahoma. Respondents with over thirteen years of service ranged from eleven at the University of Oklahoma to thirty-three at Washington State University.

For nine of the eleven descriptive characteristics, there were no significant differences among the six sample groups. Apart from the differences in count of Assistant Professors and the differences in the low and high extremes of Years of Service, the sample groups were found to be characteristically homogeneous.

Findings for Hypotheses One

This research sought to determine whether faculty at institutions with similar support systems and missions differed significantly in their perceptions of university functioning. Hypothesis One stated that there would be no significant differences among the faculties of the
University of Hawaii at Manoa, Washington State University, Florida State University, the University of Connecticut, the University of Colorado, and the University of Oklahoma, on scores on each of the eleven subscales of the Institutional Functioning Inventory.

Oneway Analysis of Variance was used to test this hypothesis, with a Scheffe a posteriori test to measure homogeneity between all possible linear combinations of the group means. For Hypothesis One the independent variables were the six universities and the dependent variables were the scores on the eleven subscales. Responses were coded so that high responses represented negative perceptions and low responses represented positive perceptions with eleven the minimum possible response and forty-four the maximum response.

Each subscale was treated as a discrete part of the analysis and is contained in a subsection. Tables 9 to 19 show the results of the Oneway ANOVA and the Scheffe for the eleven subscales.

Intellectual-Aesthetic Extracurriculum (IAE)

This subsection dealt with the data for the subscale Intellectual-Aesthetic Extracurriculum. This subscale is defined by the Educational Testing Service (E.T.S.) as referring to the "availability of activities and opportunities for intellectual and aesthetic stimulation"
outside the classroom.\(^3\).

The data for this subscale is shown on Table 9. The Analysis of Variance revealed a significant difference among the groups beyond the \(p = .05\) level. The Scheffe indicated that two university groups varied significantly on this subscale, Washington and Hawaii. The means for the two groups showing significant differences were higher than those of the other four groups. This indicated that the responses at those two universities tended to be more negative. None of the responses could be considered high, however, as the maximum response would be forty-four but the received responses ranged from seventeen point six (17.6) to twenty point two (20.2).

**Human Diversity**

The second subsection dealt with the data for the Human Diversity subscale. Human Diversity is defined by E.T.S. as relating to "the degree to which the faculty and student body are heterogeneous in their backgrounds and present attitudes."\(^4\)

The results of the statistical analyses of this subscale are arrayed on Table 10. Hawaii was the only university whose faculty scores differed significantly on this subscale. For this subscale, there was an F probability beyond \(p = .05\) which could be primarily attributed to the difference of the University of Hawaii
Table 9

The Results of the ONEWAY ANOVA and Scheffe for the Variables, IAE by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii*</td>
<td>68</td>
<td>20.2353</td>
<td>3.9137</td>
<td>0.4746</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>19.2857</td>
<td>4.0363</td>
<td>0.5766</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>17.6364</td>
<td>2.0034</td>
<td>0.2701</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>17.7377</td>
<td>2.5878</td>
<td>0.3313</td>
</tr>
<tr>
<td>Washington*</td>
<td>64</td>
<td>19.5313</td>
<td>2.5756</td>
<td>0.3220</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>18.2308</td>
<td>2.6168</td>
<td>0.3629</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>345.7196</td>
<td>69.1439</td>
<td>7.425</td>
<td>0.0000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>3193.9137</td>
<td>9.3117</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>3539.6331</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Groups which were found to be significantly different at the p ≤ .05 level by the Scheffe.
Table 10
The Results of the ONEWAY ANOVA and Scheffe for the Variables, HD by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii*</td>
<td>68</td>
<td>28.9412</td>
<td>2.3172</td>
<td>0.2810</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>27.2449</td>
<td>3.5269</td>
<td>0.5038</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>27.8909</td>
<td>2.2826</td>
<td>0.3078</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>27.9508</td>
<td>2.4182</td>
<td>0.3096</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>27.9375</td>
<td>2.4291</td>
<td>0.3036</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>28.1731</td>
<td>2.5875</td>
<td>0.3588</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>89.3196</td>
<td>17.8639</td>
<td>2.662</td>
<td>0.0223</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>2302.2012</td>
<td>6.7120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>2391.5205</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Group which was found to significantly differ at the p ≤ .05 level by the Scheffe
mean. Hawaii's mean was higher than the others, indicating more negative responses.

**Concern for Improvement of Society (IS).**

This subscale is defined by E.T.S. as reference to "a desire among people at the institution to apply their knowledge and skills in solving social problems and prompting social change in America."\(^5\)

The data and analysis of the subscale scores on the CI subscale are presented in Table 11. As on the Human Diversity subscale, Hawaii was the only university to significantly differ, and again Hawaii's mean was higher than the others indicating negativity. Table 11 shows the analysis of the subscale scores on the Concern for Improvement of Society subscale.

**Democratic Governance (DG).**

E.T.S. defines Democratic Governance as a reflection of "the extent to which individuals in the campus community who are directly affected by a decision have the opportunity to participate in making the decision."\(^6\)

The data and analysis for DG is shown on Table 12. The Scheffe analysis of the subscale Democratic Governance again showed only Hawaii differing significantly. The subscale scores for Democratic Governance ranged from twenty eight point one (28.1) to thirty-two (32). These appear to reflect general negativity at all six
Table 11
The Results of the ONEWAY ANOVA and Scheffe for the Variables, IS by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii*</td>
<td>68</td>
<td>25.0735</td>
<td>3.9675</td>
<td>0.4811</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>24.4898</td>
<td>3.2283</td>
<td>0.4612</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>22.7091</td>
<td>3.2127</td>
<td>0.4332</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>23.4262</td>
<td>2.6861</td>
<td>0.3439</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>24.4844</td>
<td>3.0809</td>
<td>0.3851</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>23.5385</td>
<td>2.8247</td>
<td>0.3917</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>227.9313</td>
<td>45.5863</td>
<td>4.404</td>
<td>0.0007</td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>3550.0273</td>
<td>10.3499</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>3777.9585</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Group which was found to differ significantly at the p≤.05 level by the Scheffe.
Table 12

The Results of the ONEWAY ANOVA and Scheffe for the Variables, DG by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii*</td>
<td>68</td>
<td>32.0000</td>
<td>3.9512</td>
<td>0.4792</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>30.2449</td>
<td>3.9133</td>
<td>0.5590</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>28.3454</td>
<td>3.4866</td>
<td>0.4701</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>28.9344</td>
<td>4.0819</td>
<td>0.5226</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>30.4844</td>
<td>3.7459</td>
<td>0.4682</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>28.1538</td>
<td>3.1460</td>
<td>0.4363</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>671.8275</td>
<td>134.3655</td>
<td>9.550</td>
<td>0.0000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>4825.9592</td>
<td>14.0699</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>5497.7852</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Group which was found to differ significantly at the p≤.05 level by the Scheffe.
universities, with the University of Hawaii reflecting the most negative response.

**Meeting Local Needs (MLN).**

Meeting Local Needs is defined by E.T.S. in reference to "an institutional emphasis on providing educational and cultural opportunities for all adults in the surrounding area, as well as meeting needs for trained manpower on the part of local businesses and government agencies."\(^7\)

The results of the analysis of the subscale scores for MLN are presented on Table 13. While the responses differed well beyond the \(p = .05\) level (\(P = .000\)), only Connecticut and Washington were found to differ significantly from the others on this subscale. Both Washington State University and the University of Connecticut had scores that were significantly higher than the other universities indicating negativity.

**Self-Study and Planning (SP).**

This subsection concerns the subscale Self-Study and Planning. The subscale Self-Study and Planning was defined by E.T.S. as relating to "the importance college leaders attach to continuous long-range planning for the total institution, and to the institutional research needed in formulating and revising plans."\(^8\)
Table 13
The Results of the ONEWAY ANOVA and Scheffe for the Variables, MLN by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>68</td>
<td>20.5735</td>
<td>3.4869</td>
<td>0.4229</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>22.3265</td>
<td>4.6070</td>
<td>0.6581</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>21.9636</td>
<td>4.3799</td>
<td>0.5906</td>
</tr>
<tr>
<td>Connecticut*</td>
<td>61</td>
<td>23.2295</td>
<td>3.7255</td>
<td>0.4770</td>
</tr>
<tr>
<td>Washington*</td>
<td>64</td>
<td>24.6094</td>
<td>3.5751</td>
<td>0.4469</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>21.2115</td>
<td>3.6747</td>
<td>0.5096</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>664.0601</td>
<td>132.8120</td>
<td>8.767</td>
<td>0.0000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>5195.9985</td>
<td>15.1487</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>5860.0586</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Groups found to significantly differ at the p≤.05 level by the Scheffe.
The analysis results for this subscale are shown on Table 14. Again, the University of Hawaii was found to be contributing to an F probability beyond $p = .05$ level by differing significantly on this subscale in a negative direction.

**Concern for Advancing Knowledge (AK)**

This subscale is defined by E.T.S. as a reflection of "the degree to which the institution - in its structure, function, and professional commitment of faculty - emphasizes research and scholarship aimed at extending the scope of human knowledge."\(^9\)

The results of the analyses of the data on the AK subscale are arrayed on Table 15. These results indicated a significant difference beyond the $p = .05$ level. Again the range test showed that only the University of Hawaii significantly differed from the other universities. Hawaii's difference was in the negative direction, as reflected by higher scores.

**Institutional Esprit (IE)**

The last of the eight subscales showing significant differences was Institutional Esprit. This subscale was defined by E.T.S. in reference to "a sense of shared purposes and high morale among faculty and administrators."\(^{10}\)

Three of the universities differed significantly on
Table 14
The Results of the ONEWAY ANOVA and Scheffe for the Variables, SP by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii*</td>
<td>68</td>
<td>26.3088</td>
<td>4.1833</td>
<td>0.5073</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>25.6326</td>
<td>4.1417</td>
<td>0.5917</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>24.2909</td>
<td>3.6599</td>
<td>0.4935</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>23.5246</td>
<td>3.3744</td>
<td>0.4321</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>24.500</td>
<td>3.3570</td>
<td>0.4196</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>23.6731</td>
<td>3.0275</td>
<td>0.2019</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean F Squares</th>
<th>Mean F Ratio</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>369.5128</td>
<td>73.9025</td>
<td>5.535</td>
<td>0.0001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>4579.8765</td>
<td>13.3524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>4949.3867</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Group found to be significantly different at the p ≤ .05 level by the Scheffe.
Table 15
The Results for the ONEWAY ANOVA and Scheffe for the Variables, AK by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii*</td>
<td>68</td>
<td>23.4412</td>
<td>2.8567</td>
<td>0.3464</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>22.6531</td>
<td>4.4560</td>
<td>0.6366</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>21.3454</td>
<td>2.2296</td>
<td>0.3006</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>21.6229</td>
<td>2.8470</td>
<td>0.3645</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>21.6094</td>
<td>2.5047</td>
<td>0.3131</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>22.8654</td>
<td>2.8835</td>
<td>0.3999</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>219.3054</td>
<td>43.8611</td>
<td>4.894</td>
<td>0.0002</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>3073.9058</td>
<td>8.9618</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>3293.2112</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Group found to significantly differ at the p≤.05 level by the Scheffe.
this subscale, the University of Colorado, Washington State University, and the University of Hawaii. The results of the analysis of this subscale are shown in Table 16. These three universities reflected mean scores between thirty-one point three (31.3) and thirty-one point nine (31.9) which may reflect a tendency toward lower morale.

Freedom (F)

This subsection discusses the results for the subscale Freedom. Freedom was defined by E.T.S. as relating to "academic freedom for faculty and students as well as freedom in their personal lives for all individuals in the campus community." 11

The results of the analysis of the Freedom subscale are on Table 17. No significant differences were found among the groups in the analyses for this subscale. All of the groups had means between thirty point two and thirty point seven. A mean score of this magnitude is relatively high as the maximum score for the subscale was forty-four. The high score indicated that there was a prevalence of negative responses on this subscale.

Concern for Innovation.

The subscale Concern For Innovation was defined by E.T.S. in reference to "in its highest form, an institutionalized commitment to experimentation with new ideas for educational practice." 12
Table 16
Results for ONEWAY ANOVA and Scheffe for the Variables, IE by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii*</td>
<td>68</td>
<td>31.8970</td>
<td>3.2742</td>
<td>0.3971</td>
</tr>
<tr>
<td>Colorado*</td>
<td>49</td>
<td>31.3061</td>
<td>3.1238</td>
<td>0.4463</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>29.5454</td>
<td>2.9741</td>
<td>0.4010</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>30.1639</td>
<td>2.4778</td>
<td>0.3172</td>
</tr>
<tr>
<td>Washington*</td>
<td>64</td>
<td>31.4688</td>
<td>2.8728</td>
<td>0.3591</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>28.9038</td>
<td>2.5457</td>
<td>0.3530</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>409.3657</td>
<td>81.8731</td>
<td>9.740</td>
<td>0.0000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>2883.1226</td>
<td>8.4056</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>3292.4883</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Groups found to significantly differ at the p ≤ 0.05 level by the Scheffe.
### Table 17

The Results for the ONEWAY ANOVA and Scheffe for the Variables, $F$ by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>68</td>
<td>30.3088</td>
<td>2.1872</td>
<td>0.2652</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>30.6939</td>
<td>2.1331</td>
<td>0.3047</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>30.5454</td>
<td>1.8239</td>
<td>0.2459</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>30.5246</td>
<td>1.8313</td>
<td>0.2345</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>30.6875</td>
<td>2.2878</td>
<td>0.2860</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>30.2115</td>
<td>2.5309</td>
<td>0.3510</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>$F$ Ratio</th>
<th>$F$ Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>11.0533</td>
<td>2.2107</td>
<td>0.481</td>
<td>0.7904</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>1576.1895</td>
<td>4.5953</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>1587.2427</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results of the analysis for Concern for Innovation are shown on Table 18. No significant differences at the $p \leq 0.05$ level were found among the groups through analysis of the CI subscale. As on the Freedom subscale, the results were in a range near thirty showing a more negative response level.

**Undergraduate Learning (UL)**

This subscale was defined by E.T.S. as a description of "the degree to which the college - in its structure, function, and professional commitment of faculty - emphasizes undergraduate teaching and learning."

The analysis for this subscale is shown on Table 19. No significant differences were found. As with Freedom and Concern for Innovation, the scores for the subscale Undergraduate Learning were near thirty indicating negativity in the responses.

**Evaluation of Hypothesis One**

Significant differences were found among the universities on eight of the subscales,

Intellectual-Aesthetic Extracurriculum (IAE)
Human Diversity (HD)
Concern for Improvement of Society (IS)
Democratic Governance (DG)
Meeting Local Needs (MLN)
Self-Study and Planning (SP)
Concern for Advancing Knowledge (AK)
Institutional Esprit (IE).

Table 20 presents the means of the six universities for
Table 18
The Results for the the ONEWAY ANOVA and Scheffe for the Variables, CI by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>68</td>
<td>29.9412</td>
<td>2.4181</td>
<td>0.2932</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>30.0000</td>
<td>2.3541</td>
<td>0.3363</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>30.3091</td>
<td>2.3950</td>
<td>0.3229</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>30.2787</td>
<td>2.2296</td>
<td>0.2855</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>30.1563</td>
<td>2.5085</td>
<td>0.3136</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>30.5577</td>
<td>2.0996</td>
<td>0.2912</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>14.4078</td>
<td>2.8816</td>
<td>0.524</td>
<td>0.7583</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>1887.0275</td>
<td>5.5015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>1901.4353</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 19

The Results for the ONEWAY ANOVA and Scheffe for the Variables, UL by University

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>68</td>
<td>30.5147</td>
<td>2.2626</td>
<td>0.2744</td>
</tr>
<tr>
<td>Colorado</td>
<td>49</td>
<td>30.4286</td>
<td>2.3541</td>
<td>0.3363</td>
</tr>
<tr>
<td>Florida</td>
<td>55</td>
<td>30.7818</td>
<td>2.6366</td>
<td>0.3555</td>
</tr>
<tr>
<td>Connecticut</td>
<td>61</td>
<td>30.7213</td>
<td>2.4975</td>
<td>0.3198</td>
</tr>
<tr>
<td>Washington</td>
<td>64</td>
<td>31.0625</td>
<td>2.0461</td>
<td>0.2558</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>52</td>
<td>30.6731</td>
<td>2.5183</td>
<td>0.3492</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F.</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>14.7569</td>
<td>2.9514</td>
<td>0.520</td>
<td>0.7609</td>
</tr>
<tr>
<td>Within Groups</td>
<td>343</td>
<td>1945.8093</td>
<td>5.6729</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>348</td>
<td>1960.5662</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 20
A Summary of the Mean Scores for Each Subscale of the Institutional Functioning Inventory and an Asterisk for Those Universities Whose Means Differed Significantly on Each Subscale

<table>
<thead>
<tr>
<th>Mean Subscale Score</th>
<th>University of Hawaii</th>
<th>University of Colorado</th>
<th>Florida State University</th>
<th>University of Connecticut</th>
<th>Washington State University</th>
<th>University of Oklahoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAE</td>
<td>20.2353*</td>
<td>19.2857</td>
<td>17.6364</td>
<td>17.7377</td>
<td>19.5313*</td>
<td>18.2308</td>
</tr>
<tr>
<td>F</td>
<td>30.3088</td>
<td>30.6939</td>
<td>30.5454</td>
<td>30.5246</td>
<td>30.6875</td>
<td>30.2115</td>
</tr>
<tr>
<td>HD</td>
<td>28.9412*</td>
<td>27.2449</td>
<td>27.8909</td>
<td>27.9508</td>
<td>27.9375</td>
<td>28.1731</td>
</tr>
<tr>
<td>IS</td>
<td>25.0735*</td>
<td>24.4898</td>
<td>22.7091</td>
<td>23.4262</td>
<td>24.4844</td>
<td>23.5385</td>
</tr>
<tr>
<td>UL</td>
<td>30.5147</td>
<td>30.4286</td>
<td>30.7818</td>
<td>30.7213</td>
<td>31.0625</td>
<td>30.6731</td>
</tr>
<tr>
<td>DG</td>
<td>32.0000*</td>
<td>30.2449</td>
<td>28.3454</td>
<td>28.9344</td>
<td>30.4844</td>
<td>28.1538</td>
</tr>
<tr>
<td>SP</td>
<td>26.3088*</td>
<td>25.6326</td>
<td>24.2909</td>
<td>23.5246</td>
<td>24.5000</td>
<td>23.6731</td>
</tr>
<tr>
<td>CI</td>
<td>29.9412</td>
<td>30.0000</td>
<td>30.3091</td>
<td>30.2787</td>
<td>30.1563</td>
<td>30.5577</td>
</tr>
<tr>
<td>IE</td>
<td>31.8970*</td>
<td>31.3061*</td>
<td>29.5454</td>
<td>30.1639</td>
<td>31.4688*</td>
<td>28.9038</td>
</tr>
</tbody>
</table>

*Indicate groups that were significantly different at the .05 level.
the eleven subscales. It was determined that for the subscales showing significant differences, only one to three universities accounted for the differences. Hawaii's faculty means differed significantly on seven of the eight of the subscales which showed significant differences. Washington's faculty means were significantly different on three subscales, Connecticut's on one, and Colorado's on one. For these reasons, the null Hypothesis One, which stated that there were no significant differences, was rejected.

**Findings for Hypothesis Two**

Hypothesis Two addressed the question of whether faculty grouped by various characteristics, 

Field of Affiliation,  
Age,  
Years of Service at That University,  
Workload,  
and Academic Rank,

differed significantly on scores on the eleven subscales of the Institutional Functioning Inventory. This hypothesis was tested using Analysis of Variance with the subscale scores as dependent variables and the characteristics as independent variables.

The entire array of the results of the ONEWAY ANOVA for the subscales by the five characteristic variables designated in Hypothesis Two is shown on Table 21, with asterisks indicating significant F probabilities.
Table 21

The F Ratios and F Probabilities for the ONEWAY ANOVA of the Eleven I.F.I. Subscales by Five Characteristic Variables

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Rank</th>
<th>Age</th>
<th>Field</th>
<th>Years</th>
<th>Workload</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAE</td>
<td>2.008</td>
<td>0.842</td>
<td>2.217</td>
<td>7.172</td>
<td>2.152</td>
</tr>
<tr>
<td></td>
<td>0.0932</td>
<td>0.4995</td>
<td>0.0207*</td>
<td>0.0000*</td>
<td>0.0744</td>
</tr>
<tr>
<td>F</td>
<td>1.289</td>
<td>1.204</td>
<td>2.640</td>
<td>3.708</td>
<td>1.336</td>
</tr>
<tr>
<td></td>
<td>0.2741</td>
<td>0.3090</td>
<td>0.0058*</td>
<td>0.0058*</td>
<td>0.2563</td>
</tr>
<tr>
<td>HD</td>
<td>0.917</td>
<td>0.216</td>
<td>1.502</td>
<td>2.194</td>
<td>1.016</td>
</tr>
<tr>
<td></td>
<td>0.4540</td>
<td>0.9294</td>
<td>0.1457</td>
<td>0.0695</td>
<td>0.3994</td>
</tr>
<tr>
<td>IS</td>
<td>5.712</td>
<td>5.021</td>
<td>1.187</td>
<td>6.915</td>
<td>1.134</td>
</tr>
<tr>
<td></td>
<td>0.0002*</td>
<td>0.0006*</td>
<td>0.3024</td>
<td>0.0000*</td>
<td>0.3407</td>
</tr>
<tr>
<td>UL</td>
<td>0.749</td>
<td>1.500</td>
<td>5.173</td>
<td>2.616</td>
<td>2.091</td>
</tr>
<tr>
<td></td>
<td>0.5590</td>
<td>0.2018</td>
<td>0.0000*</td>
<td>0.0352*</td>
<td>0.0819</td>
</tr>
<tr>
<td>DG</td>
<td>3.560</td>
<td>2.622</td>
<td>1.289</td>
<td>1.832</td>
<td>2.384</td>
</tr>
<tr>
<td></td>
<td>0.0074*</td>
<td>0.0348*</td>
<td>0.2415</td>
<td>0.0223</td>
<td>0.0514</td>
</tr>
<tr>
<td>MLN</td>
<td>1.032</td>
<td>1.386</td>
<td>2.650</td>
<td>0.795</td>
<td>1.799</td>
</tr>
<tr>
<td></td>
<td>0.3906</td>
<td>0.2385</td>
<td>0.0056*</td>
<td>0.5290</td>
<td>0.1289</td>
</tr>
<tr>
<td>SP</td>
<td>0.893</td>
<td>1.343</td>
<td>2.528</td>
<td>2.209</td>
<td>1.627</td>
</tr>
<tr>
<td></td>
<td>0.4680</td>
<td>0.2537</td>
<td>0.0081*</td>
<td>0.0679*</td>
<td>0.1673</td>
</tr>
<tr>
<td></td>
<td>0.0001*</td>
<td>0.0099*</td>
<td>0.0001*</td>
<td>0.0004*</td>
<td></td>
</tr>
<tr>
<td>CI</td>
<td>1.145</td>
<td>0.411</td>
<td>2.059</td>
<td>0.858</td>
<td>0.561</td>
</tr>
<tr>
<td></td>
<td>0.3354</td>
<td>0.8008</td>
<td>0.0326*</td>
<td>0.4893</td>
<td>0.6913</td>
</tr>
<tr>
<td>IE</td>
<td>0.426</td>
<td>0.371</td>
<td>2.164</td>
<td>1.157</td>
<td>1.286</td>
</tr>
<tr>
<td></td>
<td>0.7896</td>
<td>0.8291</td>
<td>0.0241*</td>
<td>0.3300</td>
<td>0.2754</td>
</tr>
</tbody>
</table>

Key: F Ratio
F Probability
* signifies significance at the p ≤ .05 level
Academic Rank was found to relate to significant differences in the areas Concern for the Improvement of Society (IS), Democratic Governance (DG), and Concern for Advancing Knowledge (AK). Analysis of the remaining eight subscales showed no significant differences.

Age was found to be a variable linked to significant differences on three subscales, Concern for Improvement of Society (IS), Democratic Governance (DG), and Concern for Advancing Knowledge (AK). For the remaining eight subscales, Age was not found to be a variable which related to any significant differences.

The variable which related to the greatest number of subscale scores was Field of Affiliation. This variable showed significant differences on eight subscales, Intellectual-Aesthetic Extracurricular (IAE), Freedom (F), Undergraduate Learning (UL), Meeting Local Needs (MLN), Self-Study and Planning (SP), Concern for Advancing Knowledge (AK), Concern for Innovation (CI), and Institutional Esprit (IE).

The variable Years of Service at That University was found to be linked to significant differences on five subscales, Intellectual-Aesthetic Extracurricular (IAE), Freedom (F), Concern for Improvement of Society (IS), Undergraduate Learning (UL), and Concern for Advancing Knowledge (AK). For the remaining three subscales no significant differences were observed.
Significant difference was found for the variable Workload on only one subscale, Concern for Advancing Knowledge. The ten remaining subscales did not have significant relationships with the characteristic variables.

There were significant differences for all five characteristic variables on only one subscale (AK), on one other subscale there were three significant differences, all the other subscales had two or less differences. Of fifty-five possible differences only twenty-one reached significance at the $p \leq .05$ level, thus it was not possible to reject the null hypothesis of no significant difference for this section of the study.

It should be noted, however, that there were significant differences on eight of the subscales by Field of Affiliation which would lend support to rejection of the hypothesis for Field alone.

Findings for Ancillary Question One

Ancillary Question One asked whether there were linear relationships between faculty characteristics or groups of characteristics and subscale scores. This was analyzed to provide additional information beyond that found in Hypothesis Two which looked at simple relationships between the characteristics and the subscale scores.

Regression Analysis was used to analyze the strength of
relationships in Ancillary Question One. Two sets of regressions were run, one which used the entire sample, and the other only those universities which showed significant differences in the subscale means analyzed in Hypothesis One. The second run was made in an attempt to determine what factors contributed to those differences. Regressions were run for each subscale independently against the five descriptive characteristics. The two sets of regressions will be discussed separately with each subscale as a separate part of the discussion.

Regression Analysis on Subscale Scores for the Entire Sample

Intellectual-Aesthetic Extracurriculum. For the subscale Intellectual-Aesthetic Extracurriculum (IAE) one significant relationship was found. Field of Affiliation was the only variable which remained in the stepwise regression at the .05 level:

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.1546219</td>
<td>-0.13983</td>
<td>0.06226</td>
<td>6.168</td>
<td>2.14</td>
</tr>
</tbody>
</table>

Field accounted for approximately three percent ($R^2 = 0.02784$) of the total variance on the subscale score. The prediction equation for IAE where $Y'$ represents the estimated value of the dependent variable, 21.18 is the derived constant, and 0.15 is the $B$ constant by which the
independent variable (Field) was multiplied would be:

\[ Y' = 21.18 - 0.15 \]

This shows that the effect of Field of Affiliation would be to lower the predicted score.

_Human Diversity_. One significant relationship was found for the subscale Human Diversity (HD). Rank had a significant relationship identified by the stepwise regression:

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR B</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>-.4760483</td>
<td>-0.21799</td>
<td>0.19601</td>
<td>5.899</td>
<td>2.13</td>
</tr>
</tbody>
</table>

Rank contributed to approximately three percent \( (R^2 = 0.03108) \) of the total variance on the Human Diversity scores. The prediction equation for this subscale would be:

\[ \text{Constant-B(Rank)} \]
\[ Y' = 28.95 - 0.48 \]

Rank has the effect of lowering the score on the HD subscale.

_Concern for Improvement of Society_. Three significant relationships were found between characteristic variables and the subscale Concern for the Improvement of Society (IS). These variables identified by the regression were Field of Affiliation, Age, and Workload.
Field was determined to contribute approximately three percent ($R^2 = 0.03156$) to the variance in the IS scores, Age contributed approximately five percent ($R^2 = 0.05297$), and Workload contributed approximately seven percent ($R^2 = 0.07752$). The prediction equation for IS would be:

$$Y' = 25.99 - 0.19 - 0.45 + 0.48$$

This equation shows that Field of Affiliation and Age both act to lower the predicted score while Workload has the effect of raising the predicted score.

**Undergraduate Learning.** For the subscale Undergraduate Learning, three characteristics remained from a stepwise regression at .05. These characteristics were Age, Workload, and Years of Service at That University.

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>-0.2634855</td>
<td>-0.13435</td>
<td>0.14929</td>
<td>3.115</td>
</tr>
<tr>
<td>Load:</td>
<td>-0.1896783</td>
<td>-0.09830</td>
<td>0.11654</td>
<td>2.649</td>
</tr>
<tr>
<td>Years:</td>
<td>0.3656567</td>
<td>0.23880</td>
<td>0.14614</td>
<td>6.261</td>
</tr>
</tbody>
</table>
Age determined less than one half of a percent ($R^2 = 0.00468$) of the variance in the UL subscale scores, Workload approximately one percent ($R^2 = 0.00857$), and Years of Service determined approximately three percent ($R^2 = 0.02774$). The prediction equation derived from these would be:

$$Y' = 30.57 - 0.26 - 0.19 + 0.37$$

In this equation Age and Workload lower the predicted scores while Years has the effect of raising the predicted scores.

**Democratic Governance.** Regression with the five characteristics of the Ancillary question upon the subscale Democratic Governance (DG) showed only one predictive relationship. Age was significantly related to the DG subscale scores.

<table>
<thead>
<tr>
<th>Age</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.6449433</td>
<td>-0.19638</td>
<td>0.24189</td>
<td>7.109</td>
<td>2.14</td>
</tr>
</tbody>
</table>

The proportion of variance determined by the variable Age was approximately eight percent ($R^2 = 0.08195$), providing the prediction equation:

$$Y' = 33.18 - 0.64$$
Age has the effect of lowering the predicted scores on the DG subscale.

**Meeting Local Needs.** One characteristic variable was found through regression to have variance significantly related to the subscale Meeting Local Needs. This variable was Field of Affiliation.

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field:</td>
<td>-0.1472001</td>
<td>-0.10346</td>
<td>0.8038</td>
<td>3.354</td>
</tr>
</tbody>
</table>

Field of Affiliation was found to determine approximately four percent ($R^2 = 0.04031$) of the MLN subscale scores, providing the prediction equation:

$$Y'' = 21.67 - 0.15$$

This shows that Field of Affiliation would have the effect of lowering scores of the MLN subscale.

**Self-Study and Planning.** Only one variable showed a significant relationship with the subscale Self-Study and Planning (SP). Age was shown to be a significant predictor of the scores on this subscale.

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.4099261</td>
<td>-0.13155</td>
<td>0.23138</td>
<td>3.139</td>
<td>2.14</td>
</tr>
</tbody>
</table>

Age was found to contribute approximately seven percent
(R² = 0.07443) to the variance in the SP subscale. The prediction equation would be:

\[
Y' = 28.03 - 0.41 \text{Age}
\]

Age has the effect of lowering the expected scores.

**Concern for Advancing Knowledge.** Three variables were found to be significant predictors related to the Concern for Advancing Knowledge (AK) subscale. The related characteristic variables were Field of Affiliation, Workload and Years of Service at That University.

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>0.8816186</td>
<td>0.08266</td>
<td>0.05753</td>
<td>2.348</td>
</tr>
<tr>
<td>Workload</td>
<td>0.5498745</td>
<td>0.21989</td>
<td>0.14279</td>
<td>14.829</td>
</tr>
<tr>
<td>Years</td>
<td>-0.5652630</td>
<td>-0.28484</td>
<td>0.17906</td>
<td>9.966</td>
</tr>
</tbody>
</table>

Field of Affiliation contributed approximately three percent (R² = 0.02590) to the variance on the AK subscale scores, Workload determined approximately eight percent (R² = 0.08332), and Years of Service determined approximately thirteen percent (R² = 0.13194). The prediction equation for AK would be:

\[
Y' = 23.9 + 0.88 + 0.55 - 0.57
\]
It was found, then, that Field of Affiliation and Workload both raise expected scores on this subscale while Years of Service would act to lower them.

**Concern for Innovation.** For the subscale Concern for Innovation (CI) two significant relationships with characteristic variables were found. The variables were Field of Affiliation and Academic Rank.

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field:</td>
<td>-0.1380346</td>
<td>-0.17032</td>
<td>0.04581</td>
<td>9.079</td>
<td>2.14</td>
</tr>
<tr>
<td>Academic Rank:</td>
<td>0.2960527</td>
<td>0.15204</td>
<td>0.17330</td>
<td>2.918</td>
<td>2.14</td>
</tr>
</tbody>
</table>

Field was found to determine approximately four percent ($R^2 = 0.03737$) of the variance on the CI subscale and Academic Rank determined approximately five percent ($R^2 = 0.4733$). The prediction equation for CI would be:

$$Y' = 30.39 - 0.14 + 0.30$$

For the CI subscale, Academic Rank had the effect of raising the scores and Field of Affiliation had the effect of raising them.

**Freedom.** Only the characteristic Academic Rank was found to have a predictive relationship to the subscale
Freedom.

\[
\begin{array}{cccc}
B & \text{BETA} & \text{STD ERROR} & F \\
-0.4760483 & -0.21799 & 0.19601 & 5.899 & 2.14
\end{array}
\]

Academic Rank determined approximately three percent \((R^2 = 0.3108)\) of the variance in the F scores. The prediction equation would be:

\[
\text{Constant} - B(\text{Rank}) \\
Y' = 28.95 - 0.48
\]

Rank has the effect of lowering the scores on the Freedom subscale.

**Institutional Esprit.** One characteristic variable, Age, was found to have a significant linear relationship with the subscale Institutional Esprit.

\[
\begin{array}{cccc}
B & \text{BETA} & \text{STD ERROR} & F \\
-0.2888174 & -0.11364 & 0.19062 & 2.296 & 2.14
\end{array}
\]

Age was found to determine a proportion of approximately six percent \((R^2 = 0.05637)\) of the IE subscale scores. The prediction equation would be:

\[
\text{Constant} - B(\text{Age}) \\
Y' = 32.46 - 0.29
\]

Age affects the IE subscale scores by acting to lower them.
Regression Analysis by Universities That Differed Significantly on the Scheffe Test in Hypothesis One*

Intellectual-Aesthetic Extracurricular. Two universities were significantly different from the other four on the subscale variable IAE in the analysis of Hypothesis One, the University of Hawaii and Washington State University. Examination of the regression of the five characteristics in Ancillary Question One for these universities revealed some variables which were significant at the .05 level as parts of prediction equations.

For the IAE subscale scores at the University of Hawaii, Age and Years of service were identified by stepwise regression as significant predictors.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-1.549801</td>
<td>-0.55147</td>
<td>0.62587</td>
<td>6.132</td>
<td>2.25</td>
</tr>
<tr>
<td>Years of Service</td>
<td>0.9417260</td>
<td>0.38466</td>
<td>0.55180</td>
<td>2.913</td>
<td>2.25</td>
</tr>
</tbody>
</table>

Age was found to contribute to approximately seven percent of the total variance ($R^2 = 0.0696$) and Years of Service was found to contribute to approximately fourteen percent.

*The numbers of the mailed surveys, the responses and the represented percentages by university, are displayed in Appendix G.
From these is derived the prediction equation:

\[ Y' = 19.81 - 1.54 + 0.94 \]

At the University of Hawaii, Age lowers the IAE scores and Years of Service raises them.

At Washington State University only Years of Service was found to be a probable predictor at the .05 level of the IAE subscale score.

\begin{verbatim}

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.9420496</td>
<td>-0.50043</td>
<td>0.41676</td>
<td>5.110</td>
<td>2.25</td>
</tr>
</tbody>
</table>

\end{verbatim}

Years of Service was found to contribute to approximately thirteen percent of the total variance \( R^2 = 0.1288 \), providing the prediction equation:

\[ Y' = 21.95 - 0.94 \]

Years of Service has the effect of lowering the IAE scores at Washington State University.

**Human Diversity.** The University of Hawaii was the only university to significantly differ on the Human Diversity subscale, regression was used to search for the source of this difference. The variables Years of Service and Academic Rank were found by stepwise regression to relate
to the HD subscale at the .05 level.

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Service:</td>
<td>0.8179099</td>
<td>0.56425</td>
<td>0.33024</td>
<td>6.134</td>
</tr>
<tr>
<td>Academic Rank:</td>
<td>-0.7690343</td>
<td>-0.44183</td>
<td>0.37081</td>
<td>4.301</td>
</tr>
</tbody>
</table>

Years of Service was found to contribute to approximately six percent ($R^2 = 0.6252$) of the variance and Academic Rank contributed to approximately twelve percent ($R^2 = 0.12427$). The prediction equation for HD at the University of Hawaii would be:

$$Y' = 28.40 + 0.82 - 0.77$$

For the HD subscale, Years of Service had the effect of raising scores, and Academic Rank had the effect of lowering them.

**Concern for Improvement of Society.** The University of Hawaii had a significantly higher mean score for the IS subscale than the other universities. Regression indicated that this subscale score was related to Field and Workload at the .05 level.
Field was found to contribute to approximately four percent ($R^2 = 0.04302$) of the variance and Workload was found to contribute to approximately eight percent ($R^2 = 0.07532$). The prediction equation for the IS subscale for Hawaii would be:

\[
Y' = 23.22 - 0.39 + 0.72
\]

Field of Affiliation has the effect of lowering scores on the IS subscale, while Workload has the effect of raising them.

**Democratic Governance.** The University of Hawaii was the only university to significantly differ on this subscale. No significant linear relationships were found when regression was run on that university alone.

**Meeting Local Needs.** Two universities were identified by Hypothesis One as having significantly different scores on the MLN subscale, the University of Connecticut and the Washington State University. Regressions were run to attempt to identify sources of those variances, but none of
the tested variables were found to be significant predictors at the .05 level.

**Self-Study and Planning.** The University of Hawaii was the only university found to differ significantly from the others on this subscale. Regression of the SP subscale and the characteristic variables on the University of Hawaii scores showed two variables to be predictors at the .05 level, Age, and Years of Service.

<table>
<thead>
<tr>
<th></th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>-0.37667</td>
<td>0.67656</td>
<td>2.797</td>
<td>2.25</td>
</tr>
<tr>
<td>Years of Service:</td>
<td>0.37953</td>
<td>0.59649</td>
<td>2.772</td>
<td>2.25</td>
</tr>
</tbody>
</table>

Age was determined to predict a proportion of approximately seven percent ($R^2 = 0.07477$) to the variance on the SP subscale, and Years of Service were found to contribute approximately ten percent ($R^2 = 0.10125$). The prediction equation for SP at the University of Hawaii would be:

$$Y" = 26.75478 - 1.13 + 0.99$$

Age had an effect of lowering the SP subscale scores, while Years of Service had an effect of raising them.

**Concern for Advancing Knowledge.** The University of
Hawaii was the only university identified in Hypothesis One as differing significantly on the AK subscale. The variables Workload and Years of Service were found to be significant predictors of AK scores for that campus.

<table>
<thead>
<tr>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workload:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.031701</td>
<td>0.47240</td>
<td>0.28701</td>
<td>12.921</td>
<td>2.25</td>
</tr>
<tr>
<td>Years of Service:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.6797239</td>
<td>-0.38037</td>
<td>0.37109</td>
<td>3.355</td>
<td>2.25</td>
</tr>
</tbody>
</table>

Workload determined approximately twenty-three percent ($R^2 = 0.23118$) of the variance in AK scores at the University of Hawaii, and Years of Service determined approximately twenty-seven percent ($R^2 = 0.26800$). The prediction equation was:

$$Y' = 21.52 + 1.03 - 0.68$$

For the AK subscale, Workload had an effect of raising the scores and Years of Service had the effect of lowering them.

**Institutional Esprit.** Three universities differed significantly on the IE subscale scores, the University of Hawaii, the University of Colorado, and Washington State University. Regressions for these universities were examined to look for predictive patterns.
At the University of Hawaii, Field of Affiliation and Age were significantly related to IE scores.

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>BETA</th>
<th>STD ERROR</th>
<th>F</th>
<th>F necessary for .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field:</td>
<td>0.2894947</td>
<td>0.24293</td>
<td>0.17725</td>
<td>2.668</td>
<td>2.25</td>
</tr>
<tr>
<td>Age:</td>
<td>-1.216398</td>
<td>-0.51737</td>
<td>0.52714</td>
<td>5.325</td>
<td>2.25</td>
</tr>
</tbody>
</table>

Field of Affiliation determined approximately four percent ($R^2 = 0.3727$) of the variance on the IE scores at the University of Hawaii, and Age determined approximately nine percent ($R^2 = 0.09295$). The prediction equation for IE for this campus would be:

$$y' = 31.67 + 0.29 - 1.22$$

The IE subscale scores at the University of Hawaii were increased by Field of Affiliation and decreased by Age.

At the University of Colorado and Washington State University none of the tested characteristic variables were found to have a linear relationship with IE subscale scores.

No universities differed significantly on the Undergraduate Learning, Concern for Innovation, or Freedom subscales, so regressions by university were not performed.
Summary of the Answer to Ancillary Question One

Ancillary Question One addressed the issue of whether faculty responses to various subscales differed significantly in relation to five faculty descriptive characteristics. Regression analysis performed on the entire sample showed that for some combinations of characteristic variables and subscales significant relationships existed.

Five subscales were found to have significant linear relationships with the variable Field of Affiliation, Intellectual-Aesthetic Extracurriculum, Concern for Improvement of Society, Meeting Local Needs, Concern for Advancing Knowledge, and Concern for Innovation. Five subscales were also significantly related to the variable Age, Concern for Improvement of Society, Undergraduate Learning, Democratic Governance, Self-Study and Planning, and Institutional Esprit. The variable Academic Rank was found to have significant relationships with the subscales Human Diversity, Concern for Innovation, and Freedom. Workload had significant relationships with three subscales, Concern for Improvement of Society, Undergraduate Learning, and Concern for Advancing Knowledge. Two subscales had linear relationships with the variable years, Undergraduate Learning and Concern for Advancing Knowledge.
The answer to Ancillary Question One is, therefore, yes there were linear relationships between faculty characteristics, or groups of characteristics, and subscale scores.

To obtain information supplemental to this question, Regression analysis was also performed on the data of those universities that had differed significantly from the others. This was done to determine whether some significant linear relationships existed that could help to explain the differences found. In most instances, predictive variables were identified for the differing universities that had not been significant for the sample as a whole.

**Findings for Ancillary Question Two**

Ancillary Question Two asked whether significant differences existed between each of the subscale scores when faculty were grouped by each of three variables:

a. specific college affiliation (College Affiliation)

b. majority of assignment to undergraduate teaching, graduate teaching, or research (Stress)

c. affiliation with university of own graduate matriculation and/or undergraduate matriculation (Undergraduate, Graduate)

Oneway Analysis of Variance with a Scheffe was used to answer this question, with the subscale scores as dependent variables and the characteristics as independent variables.
The significant differences found between subscale scores when grouped by different variables are discussed in this section.

Four subscales were found to have significant differences when grouped by the variable College Affiliation. These subscales were Intellectual-Aesthetic Extracurricular (IAE), Freedom (F), Concern for Improvement of Society (IS), and Self-Study and Planning (SP).

Two subscales were found to have significantly different scores when grouped by the variable Stress. These subscales were Meeting Local Needs (MLN) and Concern for Advancing Knowledge (AK).

Two subscales were found to have significant scores when grouped by the variable classification which measured Undergraduate and Graduate study at the university of affiliation. These subscales were Undergraduate Learning (UL), and Meeting Local Needs (MLN).

Table 22 shows the derived F ratios and F probabilities for the Oneway Analysis of Variance for the eleven subscales by the three variables College Affiliation, Stress, and Undergraduate/Graduate Matriculation. Asterisks are used to indicate those relationships found to be significant at the .05 level.
Table 22

The F Ratios and F Probabilities for the ONEWAY ANOVA of the Eleven I.F.I. Subscales by Three Characteristic Variables

<table>
<thead>
<tr>
<th>Subscale</th>
<th>College Affiliation</th>
<th>Stress</th>
<th>Undergraduate/Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAE</td>
<td>4.440</td>
<td>0.390</td>
<td>1.412</td>
</tr>
<tr>
<td></td>
<td>0.0000*</td>
<td>0.7601</td>
<td>0.2451</td>
</tr>
<tr>
<td>F</td>
<td>2.362</td>
<td>0.567</td>
<td>0.559</td>
</tr>
<tr>
<td></td>
<td>0.0134*</td>
<td>0.6374</td>
<td>0.5725</td>
</tr>
<tr>
<td>HD</td>
<td>0.936</td>
<td>1.026</td>
<td>2.205</td>
</tr>
<tr>
<td></td>
<td>0.4936</td>
<td>0.3813</td>
<td>0.118</td>
</tr>
<tr>
<td>IS</td>
<td>2.863</td>
<td>0.674</td>
<td>0.807</td>
</tr>
<tr>
<td></td>
<td>0.0029*</td>
<td>0.5685</td>
<td>0.4472</td>
</tr>
<tr>
<td>UL</td>
<td>1.840</td>
<td>1.021</td>
<td>3.196</td>
</tr>
<tr>
<td></td>
<td>0.0602</td>
<td>0.3836</td>
<td>0.0421*</td>
</tr>
<tr>
<td>DG</td>
<td>0.884</td>
<td>0.828</td>
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Key: F Ratio  
F Probability  
* Signifies significance at the p ≤ .05 level
Summary of Chapter Four

Chapter Four has provided the findings of the statistical analyses performed to test the hypotheses and ancillary questions. Descriptive characteristics were also provided to show comparison of the six faculty groups within the sample.

The number of answer sheets returned was found to provide a sample that would provide a ninety-five percent confidence interval. This met the standard pre-determined by the researcher so the sample size was considered adequate.

A Frequency Analysis performed on descriptive characteristics, which had been identified on the answer sheet, provided general information about the sample. The majority of respondents were faculty, between thirty and fifty-nine in age, and taught four to six credit hours last semester. Almost half of the respondents, forty-nine percent, had been at their universities for twelve or more years. The largest portion, forty-three percent, of the respondents were full Professors, and forty-eight percent were affiliated with colleges of Arts and Sciences. A large majority of respondents, eighty-four to eighty-eight percent, received none of their education at the university with which they were affiliated.

A Chi Square Test of Statistical Significance was
performed to compare the descriptive characteristics of the six faculty subgroups within the sample. Significant differences were found in two areas, Years at That University and Academic Rank. For the nine remaining descriptive characteristics no significant differences were found. So apart from the two areas, the groups were found to be statistically homogeneous.

Hypothesis One sought to determine whether faculty at institutions with similar support systems and missions differed significantly in their perceptions of morale and institutional functioning. The mean scores of the faculties varied significantly on eight subscales, IAE, HD, IS, DG, MLN, SP, AK and IE. The faculty responses of the University of Hawaii differed significantly on seven of these subscales. Washington State University faculty means were significantly different of three subscales, the University of Connecticut's and the University of Colorado's faculties each differed significantly on one subscale. The null hypothesis was rejected because significant differences were found among the universities on eight of eleven subscales.

Hypothesis Two examined whether faculty grouped by five descriptive characteristics, Field of Affiliation, Age, Years of Service at That University, Workload, and Academic Rank, differed significantly on scores on the eleven
subscales. This hypothesis was tested using One-way Analysis of Variance, and significant differences were found in three to eight subscale areas when grouped by the various characteristics. The characteristic linked to the most differences was Field of Affiliation which showed significant differences on eight subscales. The variable Years of Service showed significant differences on six subscales, and Academic Rank showed significant difference on three. The variable Age showed significant differences on three subscales, and Workload showed difference at the p = .05 level for only one. The null hypothesis was not rejected because only these twenty-one, of fifty-five possible, differences were found. Ancillary Question One asked whether there were linear relationships between faculty characteristics, or groups of characteristics, and subscale scores. Regression Analysis was used to answer this question, looking first at the entire sample and then at those university groups within the sample for which significant differences had been identified. Significant relationships were found between the various subscale scores and the descriptive variables. The variable Field of Affiliation was found to have a significant effect on the IAE and MLN subscale scores. Academic Rank showed a significant effect on HD and F scores. IS scores were found to be significantly affected by Field of Affiliation, Age, and Workload. Age, Workload, and Years of Service were
found to have significant predictive relationships with the UL subscale. The subscale scores for DG, SP, and IE were found to be significantly related to Age. The AK scores were significantly affected by Field of Affiliation, Workload, and Years of Service. Field of Affiliation and Academic Rank were found to be significant predictors for CI scores.

The second regression was run to look for further explanation of the significant differences found among the universities through the analysis of Hypothesis One. Regressions were run for each of the universities that had shown significant difference by the five characteristic variables. For three subscales, UL, CI and F no differences had been found at the $p \leq .05$ level so those were not included in this regression. Three subscales, DG, F and MLN showed no significant relationships through this regression.

The variables found to be associated with the IAE scores at the University of Hawaii were Age and Years of Service. At Washington State University, Years of Service was the only significant predictor of IAE. At the University of Hawaii, Years of Service and Rank affected HD scores, Field of Service and Workload affected IS scores, Age and Years of Service affected SP scores, and Workload and Years of Service affected the AK scores. Institutional
Esprit was found to have significant relationships with Field of Affiliation and Age at the University of Hawaii. At the other two universities for which significance had been found with IAE, the University of Colorado and Washington State University, no significant predictors were identified by the regression.

Ancillary Question Two asked whether significant differences existed between each of the subscale scores when grouped by the variables College Affiliation, Stress of Assignment, and Undergraduate/Graduate Matriculation. Analysis of Variance was used to answer this question, and significant differences were found for some subscales when grouped by the variables. Significant differences were found on three subscales when grouping was done by College Affiliation, IAE, F, IS and SP. Two subscales showed significant differences grouped by Stress of Assignment, MLN and AK. UL and MLN showed significant differences when grouped by Undergraduate/Graduate Matriculation. The results of the ANOVA were mixed; the fact that only nine tests on the eleven subscales by three variables led to a failure to reject the null hypothesis in Ancillary Question Two.
NOTES FOR CHAPTER FOUR


4Ibid.

5Ibid.

6Ibid.

7Ibid.

8Ibid.

9Ibid.

10Ibid.

11Ibid.

12Ibid.

13Ibid.
CHAPTER FIVE

Summary, Conclusions, and Recommendations

Chapter Five summarizes the first three chapters of this research, reviewing the research problem within its situational setting and with its derivative hypotheses and ancillary questions. It also summarizes the findings of the analyses of the data discussed in Chapter Four. Conclusions drawn from these analyses are given with inherent implications and recommendations.

Summary

This research examined comparative faculty perceptions of the manner in which their universities were functioning. Chapter One provided a documentary and theoretical background for the research problem, in addition to discussing the situational milieu of the problem and the related hypotheses.

Five major issues were addressed as currently important factors whose change may be affecting American universities today. These factors were Enrollment, Economic Issues, Accountability, Collective Bargaining, and Public Opinion.

Enrollment stabilization and predictions of decline have implications for university planning, staffing,
physical plant development, and maintenance. In addition, predictions of decreasing enrollment are serious in relation to recent and expected economic declines.

Inflation rates for education have been high and have shown less decrease than rates for the general economy.\(^1\) State legislatures, federal and private sources of funding all have begun to reduce, or at least fail to increase, funding for higher education.\(^2\) These cutbacks of funds are expected to continue.

In relation to budgetary cutbacks, changes have been identified in governance structures. Federal and state governments have increased their involvement in university governance, evidently in relation to attempts to control their funding contributions and to keep spending down.\(^3\) In turn, campus governance structures have been observed in many cases to be becoming increasingly bureaucratic.\(^4\)

Collective bargaining has been seen by some as a factor in changing university governance.\(^5\) Studies have differed, however, on the relative positive or negative effects that collective bargaining may have had on faculty attitudes.

Public opinion of universities may be changing. Decreased expectations of the public can be linked to changes in financial support, enrollment, policy, morale, and control.\(^6\)

These five factors all show evidence of change, and it appears that these changes are affecting university
functioning as well as faculty morale and perceptions of their working environment.

The theoretical constructs which generated the hypotheses for this research were based on elements of Kurt Lewin's "Field Theory." In addition, a relatively new approach developed by Gerald Salancik and Jeffrey Pfeffer for examination of the development of job perceptions was discussed.

The works of these theorists were examined to show the relationship of environmental factors to job attitudes and perceptions. This supported the premise of the researcher that common environmental circumstances might be creating common perceptions of university functioning.

This research systematically gathered data and compared faculty perceptions of the institutional functioning of six closely matched public universities. Comparisons were made between subscale scores on a standardized instrument, the Institutional Functioning Inventory, of faculty groups by institution and by common demographic characteristics.

The first hypothesis examined whether significant differences existed among the six faculty groups on scores of the eleven subscales of the Inventory. Hypothesis Two examined the faculties grouped by five characteristic variables to determine if significant differences existed on scores on each of the eleven subscales.
Ancillary Question One asked whether there were linear relationships between the subscale scores of the faculties examined and the five descriptive variables addressed in Hypothesis Two. The second ancillary question asked whether significant differences existed between subscale scores of faculty grouped by an additional three characteristic variables.

Chapter Two provided a literature review related to the research study. The viability of the use of measures of perception such as the Institutional Functioning Inventory was supported by literature and prior research. Findings of previous related studies were also discussed.

Morale and job satisfaction, as subjects of study, were also discussed in Chapter Two. These were considered to be particularly important as they relate to development of perceptions of the job by faculty members.

Methodology

Chapter Three provided information on the population and sample and described the sampling and data gathering procedures. In addition, Chapter Three explained the research design and the statistical analyses which were performed.

The sample chosen for this study consisted of stratified random groups selected to represent the faculties of six universities. The universities were chosen for their similarities to the University of Hawaii.
at Manoa. All of the selected universities were state controlled, coeducational and located in urban surroundings. They were also matched, where possible, for enrollment, faculty size, tuition and fees, admission selectivity, and the presence of collective bargaining.

The sizes of the sample groups were determined by a formula designed to estimate population means to provide a ninety-five percent confidence interval. Stratified random sampling was used to duplicate college affiliation patterns at the universities by choosing matched proportions of faculty from the various colleges within a university.

Surveys and answer sheets were mailed to the subjects in the sample in May of 1982. The faculty members were also sent letters of invitation to participate, a token of appreciation, and a stamped return envelope. Returned answer sheets were hand scored using cut stencils. Data was manually recorded and input to the University of Hawaii at Manoa Computer center through a remote terminal in the College of Education.

All statistical tests were performed using the SPSS: Statistical Package for the Social Sciences.7 One-way Analysis of Variance was used to test Hypotheses One and Two, as well as to answer Ancillary Question Two. Regression Analysis was used to answer Ancillary Question One.
Findings

The findings of this research were divided into five sections. These various sections presented an analysis of the characteristics of the sample, the findings for the two hypotheses and the findings for the two ancillary questions.

In the section of descriptive data, the analysis of the characteristics revealed that the mode of the sample was comprised of full Professors, who were between thirty and fifty-nine years of age, and who taught between four and six academic credits during the spring semester of 1983. The largest group of respondents was affiliated with Colleges of Arts and Sciences, and had been employed at their universities for twelve or more years. Few of the faculty surveyed had attended the university in which they were currently employed or during their undergraduate or graduate studies.

The findings for Hypothesis One revealed significant differences among the six universities on eight of the eleven subscales of the I.F.I.. The University of Hawaii at Manoa's faculty scores differed from the other universities on seven of the eight subscales. The University of Colorado and the University of Connecticut each differed on only one subscale, and the University of Washington significantly differed on three subscales. It must be noted that Florida State University and the
University of Oklahoma did not significantly differ from the sample on any subscales.

The I.F.I utilized a four point Likert type scale. Thus, if one uses the midpoint (2.5) as the point of balance between a scale of positive to negative perceptions, the subscale scores above twenty seven could be considered to be toward the negative end of the perceptual continuum while those responses below would indicate a more positive view. The range of each subscale score was from a low of eleven to a maximum of forty-four. It must be noted that directionality in scores may also have reflected institutional priorities so that in some cases negative responses may be consistent with the institutional goals of a particular university. Examination of the numerical values of the mean responses, in conjunction with the differences found, lead to the conclusions which follow.

There were five subscales for which all groups had means in a range near thirty, indicating some negativity toward the factors measured by those subscales. The five were Freedom, Undergraduate Learning, Democratic Governance, Institutional Esprit, and Concern for the Improvement of Society.

The Freedom subscale dealt with the perceived academic freedom of faculty and students in their university and
personal lives. While no significant differences were identified among the groups, all six groups responded near thirty on this subscale. This would indicate that all of the faculties perceived some restriction in their academic freedom and that this was a common perception at all of universities examined.

Undergraduate Learning dealt with the degree to which the university stresses undergraduate education. Scores at the six universities were again thirty or higher on this subscale, but no significant differences were found among them. High scores on this subscale may well be related to the purposes and missions of the universities. The studied universities all had major graduate and research programs in addition to their undergraduate teaching, therefore high scores may indicate consistency with their mission rather than criticism of the undergraduate education programs.

The Democratic Governance subscale was designed to measure the extent to which members of a university community feel they participate in decisions affecting them. The scores at the six universities ranged from twenty-eight to thirty-two on this subscale, with the University of Hawaii significantly different at thirty-two. These high scores seem to indicate that faculty at all six of the universities, and at Hawaii in particular, do not perceive that they have a great deal of participation in decision-making activities. This response could be
expected due to the governance changes that have been taking place as described in Chapter One.

Institutional Esprit, the subscale designed to measure shared purposes and high morale, was of particular interest to the researcher because of the amount of attention these factors have been receiving in recent literature. The high mean scores of the six universities imply that morale is not high, and that there is not a "sense of shared purpose." Three universities differed significantly on this subscale with scores over thirty-one. The highest mean score was for the University of Hawaii, followed by Washington State University and then the University of Colorado.

The subscale on which the mean scores were lowest was Intellectual-Aesthetic Extracurriculum. The mean scores on this subscale ranged from seventeen point six to twenty point two. This subscale referred to the availability of intellectual and aesthetic activities and the relatively positive scores indicate that faculty perceived sufficient activities to be available. The University of Hawaii and Washington State University had significantly different mean scores on the IAE subscale, their scores were twenty point two and nineteen point five. This seems to indicate less satisfaction with the available activities at those campuses.
It appears, then, that while significant differences did exist among the responses of the faculties surveyed, notable similarities also existed. Perceived responses tended to cluster in a similarly high or moderate range.

In addition to examining perceptions of faculty by university, responses of faculty grouped by various characteristics were examined by Hypothesis Two and the ancillary questions. Some significant differences were found by these analyses.

Hypothesis Two addressed the individual subscale scores when grouped by five characteristic variables, Age, Academic Rank, Field of Affiliation, Workload, and Years of Service at That University. Field of Affiliation was found to show significant difference on scores on eight subscales. The variable Years of Service at That University was found to be showed significant difference on scores on five subscales. The variable Workload showed significant differences on one subscale, Age showed significant difference on two. Significant difference was found when three subscales were grouped by Academic Rank. The null hypothesis was not rejected because only twenty-one, of fifty-five possible, significant differences were found.

The analysis for Ancillary Question One asked whether linear relationships existed between the characteristic variables (or groups of variables) discussed in Hypothesis
Two and the subscale scores. Two Regression analyses were used for this question, first looking at the entire sample and then at those universities within the sample for which significant differences had been identified.

The first Regression Analysis revealed, for the subscales IAE and MLN, that significant predictive relationships could be identified with Field of Affiliation. Academic Rank was found to affect scores on the subscales HD and F. The subscale IS was significantly affected by Field of Affiliation, Age and Workload. Age, Workload, and Years of Service were shown to significantly affect the UL scores. Field of Affiliation, Workload and Years of Service were shown to significantly affect scores on the AK subscale. CI scores were significantly affected by Field of Affiliation and Academic Rank. Age was found to be significantly related to three subscales, DG, SP and IE.

The second regression was run to examine the subscales and universities identified as significantly different in the first Hypothesis. For the IAE subscale, the University of Hawaii and Washington State University had differed. Regression showed that the variables Age and Years of Service affected the IAE scores at the University of Hawaii, only Years of Service was found to be significantly related to IAE scores at Washington State. For five of the subscales on which the University of Hawaii significantly
differed, each of the combinations of affecting variables was different: HD was affected by Years and Rank, IS was affected by Field and Workload, IE was affected by Field and Age, SP was affected by Age and Years, and AK was affected by Years and Workload. No other significant relationships were found.

The analysis of second ancillary question looked for significant differences in subscale scores when grouped by three additional variables, College of Affiliation, Stress of Assignment, and Undergraduate/Graduate Matriculation. Significant differences were found on the subscales IAE, F, IS and SP when grouped by College Affiliation. Two subscales, MLN and AK differed significantly when grouped by Stress. Grouping by Undergraduate/Graduate Matriculation resulted in significant differences in UL and MLN.

Conclusions

Conclusions can be drawn from the examination of the findings of Hypothesis Two with Ancillary Question Two, both of which were concerned with descriptive characteristics, analyzed against the subscale scores. The subscale Concern for Advancing Knowledge (AK) was found to show significant differences with five of nine identified faculty characteristics, Rank, Age, Years of Service, Workload, and Stress. As this subscale examines
perceptions of the institutions' stress and support of research and scholarship, speculations might be made as to the reasons that different faculty groups would have different perceptions on this subscale. Variables such as Field, which would separate faculty into groups which may differ greatly in their internal stress on research, would be expected to have an effect on this subscale.

The second subscale by number of significant differences was Concern for Improvement of Society which was significantly related to five characteristics, Age, Academic Rank, Years of Service, Stress, and College Affiliation. This subscale addressed the interest of the members of the institution in affecting social change. It was not surprising, in light of the findings of others concerning the changing nature of the maturing professoriate, that faculty grouped by Age, and the related categories of Academic Rank and Years of Service, differed in their perceptions on this measure. The significance of Stress and College Affiliation could be explained by the fact that professors in some fields or who are committed to teaching or research may be more service oriented than others.

Field was the only descriptive variable found to be significantly different with the Institutional Esprit (IE) subscale scores. This subscale was designed to measure
faculty morale and perceptions of their relationship with the administration. It appears that faculty in different fields vary significantly in their satisfaction with their relationships with administration and feel varied senses of shared purpose.

It was noted that the variable Undergraduate/Graduate Matriculation, which measures the amount of time, if any, faculty members spent as students at their university of their current affiliation, showed significant differences on the subscales of Undergraduate Learning and Meeting Local Needs. This indicates that faculty who had attended a particular university as students have different perceptions of the extent to which the university is serving the community and the extent to which undergraduate learning is stressed than faculty who had not attended the university where they presently work.

The subscale Human Diversity (HD) was the only subscale not found to be significantly different by any faculty characteristic grouping. This subscale relates to the heterogeneous nature of the faculty and students. This subscale may be said to more objective than those which were notably related to faculty characteristics, which may explain the homogeneity in the responses. This homogeneity also implies, however, that the six campuses may be quite similar in the extent to which they are heterogeneous in ethnic and social backgrounds.
The major conclusion of this research is that in spite of similarities of mission and support systems, commonality of many internal and external factors, and relative homogeneity of faculty characteristics, faculty perceptions of their universities do significantly differ. The University of Hawaii particularly stood out with significant differences on seven subscales. At the University of Oklahoma (no significant differences), Florida State University (no significant differences), the University of Connecticut (one significant difference) and the University of Colorado (one significant difference), subscale scores did not notably differ. The three significant differences at Washington State University bore examination.

A ten-year study by the Institute of Higher Education at Columbia University, which included ninety-three colleges and universities and surveyed over five thousand faculty members, found several trends which have been reflected in this project. The national project found, in 1982, that Concern for Innovation (CI) scores were more negative than in previous years. CI scores in this study were high, reflecting this negativity. This may be a function of several factors including reduced budgets, lack of community encouragement, and changing governance. Whatever the causes, however, faculty seem to perceive that
innovation is not prevalent.

The Columbia study identified significant links between faculty morale and scores on the Institutional Esprit, Democratic Governance, and Self-Study and Planning subscale scores. Declines in faculty participation in governance, involvement in planning and in sense of shared purpose were said to reflect a general lowering of faculty morale.

The current research mirrored the Columbia study with negative perceptions of participation in governance (DG) and shared purposes (IE). The self-study and planning (SP) subscale scores were not as high; they ranged from twenty-three point five to twenty-six point three.)

At the University of Hawaii, significant differences from the other universities were found for the three subscales defined as morale linked (IE, DG and SP). These scores were significantly higher at the University of Hawaii, reflecting less satisfaction with these factors, than the other universities. Using the Columbia definition as a basis, morale appears to be low at the University of Hawaii. The fact that four other subscales showed significantly high scores at the University of Hawaii showed that perceptions of the functioning of the institution are more negative than at any of the other institutions.

At the University of Hawaii, Field of Affiliation was responsible for a significant amount of variance in the
Institutional Esprit scores. This, again, leads one to believe that professors in some fields are more satisfied with their relationship with the administration and feel a stronger sense of shared purpose than others. Interestingly, though, Field of Affiliation was not a contributing factor on any of the other subscales for which Hawaii varied significantly.

For Human Diversity, Concern for Improvement of Society, Self-Study and Planning, and Concern for Advancing Knowledge, the variable Years of Service was a factor which contributed to the significant variance in scores at the University of Hawaii. It is notable that this was not generally linked to effects of Age or Academic Rank. It could well be that the "seniority" of years of service puts professors in different situations which affect their perceptions. For example, in relation to the subscale SP, which refers to planning, senior professors may have a different amount of involvement in planning or may desire a different amount of involvement. While those are speculations, the conclusion remains that Years of Service is a notable factor in perception of several aspects of functioning at the University of Hawaii.

Workload was found to contribute to variance on two subscales at the University of Hawaii, Concern for advancing Knowledge and Concern for Improvement of Society.
These subscales are somewhat related in their measurement of external goals. It appears that, at the University of Hawaii, the time a professor spends on teaching or research is a factor in their perception of the extent to which the university is pursuing these goals.

The most notable of the three significant differences identified at Washington State University was the high IE score which indicated a low sense of shared purpose, a measure designed by E.T.S. to be a reflection of morale. The other two significant differences were on IAE and MLN subcales, but the Washington State means were not notably high, just significantly higher than some of the other campuses.

Recommendations

This research has shown that universities that were seemingly alike in many support and personnel characteristics may differ significantly in faculty perceptions. There is evidence that the functioning of the University of Hawaii at Manoa is significantly different from the other universities in some way that is not readily identified by faculty and situational characteristics as examined in this study.

For the University of Hawaii, need for further internal research is most evident. Investigation of the causes of the Hawaii faculty's significant variation from other
faculties at matched universities warrants further research into the specifics of the functioning of that campus. Detailed item analysis and analysis of each value of the studied characteristics, both using the existing data, may give some indication of the sources of difference. This information would also provide direction for further internal study. In addition the data may be reorganized to examine such factors as affects of collective bargaining, or budgetary comparisons. Additional studies using interviews and a variety of instruments might be able to identify sources of difference and their relative importance.
NOTES FOR CHAPTER FIVE


2 Ibid.


4 Ibid.


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Dear Professor:

I am a graduate assistant in the Department of Educational Administration at the University of Hawaii making a comparative study of faculty perceptions of institutional functioning at six universities with similar organizational characteristics. The hypotheses of this study examine whether universities of similar size and mission vary significantly on the subscales of the enclosed instrument. I will also be looking for the relationships between certain demographic variables and the subscale scores.

Names of prospective respondents were randomly selected from catalogs or directories of the six universities chosen. The anonymity of the respondents will be protected. Certain demographic information will be asked for, but there will be no way to link that data to the responses of individual faculty.

Please read the enclosed directions and survey, complete the answer sheet, and return both in the enclosed envelope.

If you wish to receive a summary of the results of this study, please return the enclosed request under separate cover.

Thank you in advance for using your valuable time to complete this instrument and assist in the creation of a data base for research on this timely and important topic. As you know, Graduate Assistants carrying out their research are not in a substantial financial position to reward their respondents, however, please accept the enclosed card as a modest but sincere indication of my gratitude.

Aloha and Mahalo,

Angela L. Chaille
Dear Professor:

On March 1, 1983 I sent you a letter asking that you complete a survey measuring your perceptions of institutional functioning of the University of Hawaii at Manoa. I am a graduate student in the Department of Educational Administration and the data from this survey will be used in the development of my dissertation. I hope that you will read the directions and survey, complete the answer sheet, and return both to me.

The anonymity of the respondents is being protected. Certain demographic information is asked for, but there will be no way to link that data to the responses of individual faculty. The number on the answer sheet was for the purpose of this mailing list follow-up. It will be erased before scoring, or you may erase it yourself if you prefer.

Responses are also being solicited from faculty at five universities on the mainland. The hypotheses of this study examine whether universities of similar size and mission vary significantly on the subscales of this instrument. I will also be looking for the relationships between certain demographic variables and the subscale scores.

Thank you in advance for using your valuable time to complete the instrument and assist in the creation of a data base for research on this timely and important topic.

Aloha and Mahalo,

Angela L. Chaille
Dear Professor:

I recently sent you a letter asking that you complete a survey measuring your perceptions of institutional functioning at your university. I am a graduate student in the Department of Educational Administration and the data from this survey will be used in the development of my dissertation.

Responses have been solicited from faculty at six universities. The hypotheses of this study examine whether universities of similar size and mission vary significantly on the subscales of the instrument. I will also be looking for the relationships between certain demographic variables and the subscale scores.

If you have already responded to my request, thank you very much. I have appreciated the encouragements and noted any criticisms which I have received. If you have not responded, please take a few moments of your valuable time to do so, your response will make a difference in the accuracy of the final results.

Aloha and Mahalo,

Angela L. Chaille
INSTITUTIONAL FUNCTIONING INVENTORY

TO THE RESPONDENT:

This inventory is for institutional self-study. In it you will be asked for your perceptions about what your institution is like—administrative policies, teaching practices, types of programs, characteristic attitudes of groups of people, and so forth. This inventory is not a test; the only “right” answers are those that reflect your own perceptions, judgments, and opinions. Results will be summarized only for groups. In no instance will responses of individuals be reported.

Confidentiality of responses can be assured by not giving your name on the answer sheet. Comments and criticisms are invited regarding any aspect of the inventory; please send them to Institutional Functioning Inventory, ETS College and University Programs, Princeton, NJ 08541.

DIRECTIONS:

1. PENCILS. Use any soft lead pencil (preferably No. 2). Do not use an ink or ball-point pen.

2. MARK ONLY ON THE SEPARATE ANSWER SHEET. Please make no marks in this booklet, which may be reused.

3. INFORMATION ITEMS. Fill in the name of your institution on the answer sheet. Then answer the questions that apply to you on the right-hand side of the answer sheet. Blacken only one answer oval for each question. All respondents should answer Item I and each of the Items II-VI that apply.

4. SUBGROUPS. Instructions may be given for gridding the Subgroup item. If not, please leave it blank.

5. LOCAL OPTION QUESTIONS (A-J). A sheet of additional questions designed to provide information for local research purposes may be enclosed in this booklet. If so, mark your responses to these questions in the appropriate ovals below the boxes lettered A through J on the answer sheet. Mark only one response to each question.

6. MARKING YOUR RESPONSES. Sections 1 and 3 consist of statements about policies and programs that may or may not exist at your institution. Indicate whether you know a given situation exists or does not exist by gridding either YES, NO, or (? (DON'T KNOW).

In Sections 2 and 4, the statements are such that different individuals at the college will have different opinions or judgments. Indicate your opinion by gridding either STRONGLY AGREE, AGREE, DISAGREE, or STRONGLY DISAGREE.

7. STUDENTS. Students should answer only the questions in Section 1 and Section 2 of the inventory (statements 1 through 72).

8. RESPOND TO EVERY STATEMENT. Please try to mark a response for every statement in the inventory (or, for students, in Sections 1 and 2). Leave blank only those statements that clearly do not apply to your institution.

9. MARK ONLY ONE RESPONSE FOR EACH STATEMENT.

The Institutional Functioning Inventory was developed in collaboration with the Institute of Higher Education, Teachers College, Columbia University, under a grant from the Kettering Foundation.

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SECTION 1

Respond to statements on this page by placing either:

YES (Y)                    NO (N)
If the statement applies or is true               If the statement does not apply or is not true
at your institution.                             at your institution.

DON'T KNOW (?)
If you do not know whether the statement applies or is true.

1. There is a campus art gallery in which traveling exhibits or collections on loan are regularly displayed.

2. There are provisions by which some number of educationally disadvantaged students may be admitted to the institution without meeting the normal entrance requirements.

3. There are programs and/or organizations at this institution that are directly concerned with solving pressing social problems, e.g., race relations, urban blight, rural poverty, etc.

4. A number of professors have been involved in the past few years with economic planning at either the national, regional, or state level.

5. Foreign films are shown regularly on or near campus.

6. There are established procedures by which students may propose new courses.

7. This institution attempts each year to sponsor a rich program of cultural events—lectures, concerts, plays, art exhibits, and the like.

8. There are no written regulations regarding student dress.

9. Professors from this institution have been actively involved in framing state or federal legislation in the areas of health, education, or welfare.

10. A number of nationally known scientists and/or scholars are invited to the campus each year to address student and faculty groups.

11. This institution deliberately seeks to admit a student body in which a variety of attitudes and values will be present.

12. Quite a number of students are associated with organizations that actively seek to reform society in one way or another.

13. When this institution is looking for new faculty, it goes primarily to a limited number of particular graduate schools.

14. At least one modern dance program has been presented in the past year.

15. Students publish a literary magazine.

16. In the past two years, administrators or the governing board have countermanded one or more invitations from student groups to controversial speakers.

17. Faculty promotion and tenure are based primarily on assessments of teaching effectiveness.

18. This institution, through the efforts of individuals and/or specially created institutes or centers, is actively engaged in projects aimed at improving the quality of urban life.

19. A concerted effort is made to attract students of diverse ethnic and social backgrounds.

20. At least one serious classical music concert has been given within the past year.

21. At least one poetry reading, open to the campus community, has been given within the past year.

22. The institution imposes certain restrictions on off-campus political activities by faculty members.

23. One of the methods used to influence the flavor of the college is to try to select students with fairly similar personality traits.

24. A number of faculty members or administrators from this institution have gone to Washington to participate in planning various government programs.

25. There are a number of student groups that meet regularly to discuss intellectual and/or philosophic topics.


26. In general, decision making is decentralized whenever feasible or workable.

27. Many faculty members would welcome the opportunity to participate in laying plans for broad social and economic reforms in American society.

28. This institution tends to attract students from a somewhat restricted range of socioeconomic backgrounds.

29. Meaningful arrangements exist for expression of student opinion regarding institutional policies.

30. An essentially free student newspaper exists on this campus (with accountability mainly to its readership).

31. Little money is generally available for inviting outstanding people to give public lectures.

32. Generally speaking, there is not very much contact between professors and undergraduates outside the classroom.

33. Senior professors seldom teach freshman or sophomore courses.

34. Application of knowledge and talent to the solution of social problems is a mission of this institution that is widely supported by faculty and administrators.

35. A visitor to this campus would most certainly notice the presence of poets, painters, and political activists.

36. In dealing with institutional problems, attempts are generally made to involve interested people without regard to their formal position or hierarchical status.

37. Either tutorials or extensive independent studies are important features of the undergraduate curriculum.

38. This institution tends to be dominated by a single "official" point of view.

39. Religious authority has meant some curtailment of academic freedom for faculty and students.

40. When recruiting new faculty, care is taken to seek candidates with a particular set of personal values.

41. Power here tends to be widely dispersed rather than tightly held.

42. A wide variety of religious backgrounds and beliefs are represented among the faculty.

43. A wide variety of religious backgrounds and beliefs are represented in the student body.

44. Serious consideration is given to student opinion when policy decisions affecting students are made.

45. How best to communicate knowledge to undergraduates is not a question that seriously concerns a very large proportion of the faculty.

46. In reality, a small group of individuals tends to pretty much run this institution.

47. Radical social or political organizations are not, or probably would not be, allowed to organize units on this campus.

48. Governance of this institution is clearly in the hands of the administration.

49. Professors get to know most students in their undergraduate classes quite well.

50. In arriving at institutional policies, attempts are generally made to involve all the individuals who will be directly affected.

51. Most faculty members do not wish to spend much time in talking with students about students' personal interests and concerns.

52. The notion of colleges and universities assuming leadership in bringing about social change is not an idea that is or would be particularly popular on this campus.

53. Compared with most other colleges, fewer minority groups are represented on this campus.

54. Certain highly controversial figures in public life are not allowed or probably would not be allowed to address students.
Continue responding to statements on this page by gridding either:
STONGLY AGREE (SA), AGREE (A), DISAGREE (D), or STRONGLY DISAGREE (SD)

55. Eccentric convictions and unpopular beliefs among faculty members are generally not frowned upon by senior administrators or governing board members.

56. The student newspaper comments regularly on important issues and ideas (in addition to carrying out the more customary tasks of student newspapers).

57. There is wide faculty involvement in important decisions about how the institution is run.

58. Because of the pressure of other commitments, many professors are unable to prepare adequately for their undergraduate courses.

59. Most faculty members are quite sensitive to the interests, needs, and aspirations of undergraduates.

60. Senior administrators generally support (or would support) faculty members who spend time away from the campus consulting with governmental agencies about social, economic, and related matters.

61. Faculty members feel free to express radical political beliefs in their classrooms.

62. Students, faculty and administrators all have opportunities for meaningful involvement in campus governance.

63. In recruiting new faculty members, department chairpersons or other administrators generally attach as much importance to demonstrated teaching ability as to potential for scholarly contribution.

64. The governing body (e.g., Board of Trustees) strongly supports the principle of academic freedom for faculty and students to discuss any topic they may choose.

65. Students or faculty members whose records contain suggestions of unusual characteristics—e.g., bizarre activities, unpopular ideas—are not encouraged to remain here.

66. Many opportunities exist outside the classroom for intellectual and aesthetic self-expression on the part of students.

67. A concept of "shared authority" (by which the faculty and administration arrive at decisions jointly) describes fairly well the system of governance on this campus.

68. Capable undergraduates are encouraged to collaborate with faculty on research projects or to carry out studies of their own.

69. Most faculty on this campus tend to be reasonably satisfied with the status quo of American society.

70. The governing board does not consider active engagement in resolving major social ills to be an appropriate institutional function.

71. Institutional authorities have reprimanded faculty members who have publicly registered their dissent concerning policies of the state or federal government.

72. Unorthodox student life styles tend to be viewed with disfavor by institutional authorities.

STUDENTS: STOP HERE
SECTION 3

Respond to statements on this page by gridding either:

YES (Y) If the statement applies or is true at your institution.
NO (N) If the statement does not apply or is not true at your institution.
DON'T KNOW (?) If you do not know whether the statement applies or is true.

73. This institution operates a program of evening courses open to local area residents.
74. Government or foundation research grants comprise a substantial portion of the institution's income.
75. Courses are offered through which local area residents may be retrained or upgraded in their job skills.
76. There is a long-range plan for the institution that is embodied in a written document for distribution throughout the institution.
77. Counseling services are available to adults in the local area seeking information about educational and occupational matters.
78. Reports of various institutional studies are announced generally and made available to the entire teaching and administrative staff.
79. A number of departments frequently hold seminars or colloquia in which a visiting scholar discusses ideas or research findings.
80. There is a job placement service through which local employers may hire students for full- or part-time work.
81. One or more individuals are presently engaged in long-range financial planning for the total institution.
82. Quite a number of faculty members have had books published in the past two or three years.
83. Facilities are made available to local groups and organizations for meetings, short courses, clinics, forums, and the like.
84. The institution has a long-range plan based on a reasonably clear statement of goals.
85. There are a number of research professors on campus, i.e., faculty members whose appointments primarily entail research rather than teaching.
86. There are a number of courses or programs that are designed to provide trained personnel for local area business, industry, or public services.
87. Courses dealing with artistic expression or appreciation are available to all adults in the local area.
88. At the present time, there is greater emphasis on departmental planning than on institution-wide planning.
89. The average teaching load in most departments is eight credit hours or fewer.
90. Faculty promotions generally are based primarily on scholarly publication.
91. The curriculum is deliberately designed to accommodate a great diversity in student ability levels and educational-vocational aspirations.
92. Analyses of the philosophy, purposes, and objectives of the institution are frequently conducted.
93. Planning at this institution is continuous rather than one-shot or completely nonexistent.
94. Extensive laboratory facilities exist for research in the natural sciences.
95. Attention is given to maintaining fairly close relationships with businesses and industries in the local area.
<table>
<thead>
<tr>
<th>Statement</th>
<th>STRONGLY AGREE (5A)</th>
<th>AGREE (A)</th>
<th>DISAGREE (D)</th>
<th>STRONGLY DISAGREE (SD)</th>
</tr>
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<tbody>
<tr>
<td>96. There is a general willingness here to experiment with innovations that have shown promise at other institutions.</td>
<td>If you strongly agree with the statement as applied to your institution.</td>
<td>If you mildly agree with the statement as applied to your institution.</td>
<td>If you mildly disagree with the statement as applied to your institution.</td>
<td>If you strongly disagree with the statement as applied to your institution.</td>
</tr>
<tr>
<td>97. Most faculty members consider the senior administrators on campus to be able and well-qualified for their positions.</td>
<td>If you strongly agree with the statement as applied to your institution.</td>
<td>If you mildly agree with the statement as applied to your institution.</td>
<td>If you mildly disagree with the statement as applied to your institution.</td>
<td>If you strongly disagree with the statement as applied to your institution.</td>
</tr>
<tr>
<td>98. In the past few years, there have been a number of major departures from old ways of doing things at this institution.</td>
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<td>99. In general, the governing board is committed to the view that advancement of knowledge through research and scholarship is a major institutional purpose.</td>
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<td>100. A sense of tradition is so strong that it is difficult to modify established procedures or undertake new programs.</td>
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<tr>
<td>101. High-ranking administrators or department chairpersons generally encourage professors to experiment with new courses and teaching methods.</td>
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<td>102. Few, if any, of the faculty could be regarded as having national or international reputations for their scientific or scholarly contributions.</td>
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<td>103. The change that has taken place at this institution in recent years has been more the result of internal and external influences than of institutional purposes (and deliberate planning based thereon).</td>
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<td>104. Generally speaking, top-level administrators are providing effective educational leadership.</td>
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<td>105. It is almost impossible to obtain the necessary financial support to try out a new idea for educational practice.</td>
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<td>106. Generally speaking, communication between the faculty and the administration is poor.</td>
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<td>107. There have been few significant changes in the overall curriculum in the past five years.</td>
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<td>108. Currently there is wide discussion and debate in the campus community about what the institution will or should be seeking to accomplish five to ten years in the future.</td>
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<tr>
<td>109. Professors engaged in research that requires use of a computer have easy access to such equipment.</td>
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<tr>
<td>110. Most administrators and faculty tend to see little real value in data-based institutional self-study.</td>
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<tr>
<td>111. Staff insighting, backbiting, and the like seem to be more the rule than the exception.</td>
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<tr>
<td>112. The institution is currently doing a successful job in achieving its various goals.</td>
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<tr>
<td>113. Proposed curricular changes seem to be accepted or rejected more on the basis of financial considerations than of assumed educational merit.</td>
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<tr>
<td>114. The curriculum committee of the college concerns itself with basic curriculum issues rather than, for example, merely approving or disapproving new courses.</td>
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<tr>
<td>115. One or more important scientific breakthroughs have been achieved at this institution in the past five years.</td>
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<tr>
<td>116. Close personal friendships between administrators and faculty members are quite common.</td>
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<tr>
<td>117. In comparison with most other institutions, faculty turnover here appears to be somewhat high.</td>
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<tr>
<td>118. Almost all ideas for innovations must receive the approval of top-level administrative officials before they can be tried out.</td>
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<tr>
<td>119. There are no courses or programs for students with educational deficiencies, i.e., remedial work.</td>
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</tr>
<tr>
<td>120. This institution would be willing to be among the first to experiment with a novel educational program or method if it appeared promising.</td>
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<td></td>
</tr>
</tbody>
</table>
Continue responding to statements on this page by selecting either:

STONGLY AGREE (SA), AGREE (A), DISAGREE (D), or STRONGLY DISAGREE (SD)

121. Although they may criticize certain practices, most faculty seem to be very loyal to the institution.

122. There is a strong sense of community, a feeling of shared interests and purposes, on this campus.

123. In general, faculty morale is high.

124. There is an air of complacency among many of the staff, a general feeling that most things at the college are all right as they are.

125. There is an institutional research unit at this institution that does more than simply gather facts for the administration.

126. The faculty in general is strongly committed to the acknowledged purposes and ideals of the institution.

127. In my experience it has not been easy for new ideas for educational practice to receive a hearing.

128. The location of this campus makes it easily accessible to students who live at home and commute.

129. Senior administrators do not consider advancement of knowledge through research to be an important institutional purpose.

130. This institution considers its most valuable service to lie in educating the upper 10 percent or so of secondary school graduates.

131. Most faculty would not defend the institution against criticisms from outsiders.

132. Laying plans for the future of the institution is a high priority activity for many senior administrators.

Comments and criticisms regarding any aspect of the inventory are welcomed; please send them to:

Institutional Functioning Inventory
ETS College and University Programs
Princeton, NJ 08541
APPENDIX E

Definitions of the Subscales of the I.F.I.


Intellectual-Aesthetic Extracurriculum refers to the availability of activities and opportunities for intellectual and aesthetic stimulation outside the classroom.

Freedom has to do with academic freedom for faculty and students as well as freedom in their personal lives for all individuals in the campus community.

Human Diversity has to do with the degree to which the faculty and student body are heterogeneous in their backgrounds and present attitudes.

Concern for Improvement of Society refers to a desire among people at the institution to apply their knowledge and skills in solving social problems and prompting social change in America.

Concern for Undergraduate Learning describes the degree to which the college - in its structure, function, and professional commitment of faculty - emphasizes undergraduate teaching and learning.

Democratic Governance reflects the extent to which individuals in the campus community who are directly affected by a decision have the opportunity to participate in making the decision.

Meeting Local Needs refers to an institutional emphasis on providing educational and cultural opportunities for all adults in the surrounding area, as well as meeting needs for trained manpower on the part of local businesses and government agencies.

Self-Study and Planning has to do with the importance college leaders attach to continuous long-range planning for the total institution, and to institutional research needed in formulating and revising plans.
Concern for Advancing Knowledge reflects the degree to which the institution—in its structure, function, and professional commitment of faculty—emphasizes research and scholarship aimed at extending the scope of human knowledge.

Concern for Innovation refers, in its highest form, to an institutionalized commitment to experimentation with new ideas for educational practice.

Institutional Esprit refers to a sense of shared purposes and high morale among faculty and administrators.
INSTRUCTIONS:

I. Mark your responses by blackening the appropriate oval. Do not use check marks or X's.

II. Respond to the information items and the sections of the inventory that apply to you.

III. All respondents: mark the one that best describes your role.

IV. Faculty and students: indicate credit hour teaching or course load this term.

V. Faculty: indicate number of years on the faculty of this college.

VI. Faculty: indicate academic rank.

Subgroups:

- Four
- Five
- Three

Local option questions (A-J):

1. Under 30
2. 30 to 40
3. 40 to 50
4. 50 to 60
5. 60 or Over
LOCAL OPTION QUESTIONS

Please respond to these on the LOCAL OPTION QUESTIONS section of your answer sheet.
You may ignore the SUBGROUPS section.

A. Indicate the College with which you are affiliated:
   (Note answers continue into column B.)

   0  Not in list A
   1  Arts and Sciences
   2  Business Administration
   3  Continuing Education
   4  Education
   5  Engineering
   6  Agriculture
   7  Medicine
   8  Nursing
   9  Public Health

B.

   0  Not in list B
   1  Architecture
   2  Library Studies
   3  Law
   4  Marine Programs
   5  Other
   6-9  Disregard

C. Indicate the activity on which you spend the largest portion of your work time.

   0  Other
   1  Undergraduate Teaching
   2  Graduate Teaching
   3  Research
   4-9  Disregard

D. How much of your graduate education did you receive at the university where you now work?

   0  None
   1  Less than half
   2  More than half

E. How much of your undergraduate education did you receive at the university where you now work?

   0  None
   1  Less than half
   2  More than half

END (There are no F-J questions.)

THANKS
APPENDIX G

Table 23

Table Showing the Numbers of the Mailings, the Numbers of Returns, and the Percentages They Represent for the Six Groups Within the Sample

<table>
<thead>
<tr>
<th>University</th>
<th>Number Mailed</th>
<th>Number Returned</th>
<th>Percentage Represented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>153</td>
<td>68</td>
<td>.44</td>
</tr>
<tr>
<td>Colorado</td>
<td>151</td>
<td>49</td>
<td>.33</td>
</tr>
<tr>
<td>Florida State</td>
<td>149</td>
<td>56</td>
<td>.37</td>
</tr>
<tr>
<td>Connecticut</td>
<td>149</td>
<td>62</td>
<td>.41</td>
</tr>
<tr>
<td>Washington State</td>
<td>151</td>
<td>64</td>
<td>.42</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>150</td>
<td>52</td>
<td>.37</td>
</tr>
<tr>
<td>Total*</td>
<td>893</td>
<td>349</td>
<td>.39</td>
</tr>
</tbody>
</table>

*Determined to meet confidence level of ninety-five percent.