

ROLE EXPECTATIONS OF COMMUNITY JUNIOR COLLEGE
DEPARTMENT CHAIRPERSONS

Dissertation for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY

CLYDE D. CARNEGIE

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ABSTRACT

ROLE EXPECTATIONS OF COMMUNITY JUNIOR COLLEGE DEPARTMENT CHAIRPERSONS

By

Clyde D. Carnegie

The administrative roles of community junior college chairpersons have been studied by researchers (Smith, 1970; Anthony, 1972; Ravetch, 1972; Freligh, 1973; and Lombardi, 1974) but little information exists as to the administrative activities the chairperson should perform as perceived by upper echelon administrators, department chairpersons, and faculty in the community junior college. Part of the problem in describing the chairperson's role has occurred as a result of community junior colleges accepting collective bargaining and at the same time attempting to re-define the chairperson's role in either the faculty or administrative bargaining unit. Another problem in describing the chairperson's role has been that upper echelon administrators, department chairpersons, and faculty have different levels of administrative expectations for the chairperson. This difference in perceived administrative tasks has developed to be a hindrance



to chairpersons in managing their departments to attain departmental and institutional goals. Therefore, this study was undertaken as a means to clarify the administrative functions for community junior college chairpersons as perceived by upper echelon administrators, department chairpersons, and faculty. The specific purposes of this study are as follows:

A. To generate a set of administrative functions from duty statements and role expectations found in the research literature that describe what administrative activities the department chairperson should perform in the community junior college.

B. To examine the perceived validity of the generated administrative functions, using a survey questionnaire, by sampling department faculty, department chairpersons and upper echelon administrators in selected Michigan community junior colleges.

C. To express the generated administrative functions as performance objects that describe what the department chairperson should be able to do, the conditions under which performance is to be done, and the level of performance to be attained in completing the activity.

A survey questionnaire was developed to ask upper echelon administrators, department chairpersons, and

1. The first of the two main groups of the class is the group of the "foreign" class.

2. The second of the two main groups of the class is the group of the "foreign" class.

3. The third of the two main groups of the class is the group of the "foreign" class.

department faculty to respond to the 35 administrative activities (grouped under six administrative functions) and indicate the extent to which they perceived department chairpersons were or were not doing these tasks; i.e., the actual administrative behavior. They were asked to indicate the extent to which they felt department chairpersons should or should not be doing these tasks; i.e., the desired administrative behavior.

The six categories of administrative functions were listed in three separate questionnaires and submitted to department faculty, department chairpersons, and upper echelon administrators to determine their importance relative to the department chairperson's administrative role expectations.

The population for this study consisted of ten community junior colleges in Michigan having department chairpersons in their Liberal Arts College/Division.

The following statistically significant findings were gained from the results.

1. There was no significant interaction between Tests (T_1 and T_2) and Positions (UEA, DC, and DF), $p < .8206$.
2. There was no significant difference among UEA's, DC's and DF across Tests (T_1 and T_2), $p < .0987$.

Although the subjects were grouped into three distinct positions (UEA, DC, and DF) there was no

interaction between groups in the tests for actual and desired behavior for department chairpersons.

3. There was a significant difference between Tests (T_1 and T_2) with $p < .0001$.

It was concluded there was a significant difference in T_1 and T_2 at the .05 level across the three positions (UEA, DC, and DF).

4. On the Test for Actual Behavior (T_1), UEA's DC's and DF tended to agree that department chairpersons generally perform the six administrative functions; ungrouped data 95% confidence interval = 2.0830 to 2.2148.
5. On the Test for Desired Behavior (T_2) UEA's, DC's and DF tended to agree that the six administrative functions were highly desired activities for department chairpersons; 95% confidence interval = 1.6215 to 1.7163.

It was concluded from the findings of Test (T_2) that UEA's, DC's and DF tended to agree that the 35 items that made up the six administrative functions were important tasks for the department chairperson.

6. Upper echelon administrators, department chairpersons, and department faculty tended to agree that the six administrative functions are significant tasks for the department chairperson (UEA, $p < .019$; DC, $p < .011$; DF, $p < .001$).

Recommendations

1. That each community junior college continue to carry out periodic institutional studies with upper echelon administrators, department chairpersons, and

Interaction between groups in the lower 10% level and

desired behavior for adjustment characteristics

3. There was a significant difference between

Groups 1, 2 and 3, with a result

It was concluded there was a significant effect

once in 1, and 2, at the 10 level across the whole

population (1984-85) and not

department faculty to determine the department chairperson's administrative role.

2. That the department chairperson's administrative role be expressed in terms of performance objectives to serve as guidelines for the evaluation of department chairpersons.

3. That community junior colleges develop administrative functions and performance objectives to serve as criteria in aiding the recruitment of prospective department chairpersons.

4. That community junior colleges develop administrative functions and performance objectives to serve as criteria in evaluating department chairpersons for promotion and salary determination.

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person's administrative role.

5. That the department chairperson's administra-

tive role be expressed in terms of performance objectives

to serve as guidelines for the evaluation of department

ROLE EXPECTATIONS OF COMMUNITY JUNIOR
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Clyde D. Carnegie^{avid}

A DISSERTATION

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DOCTOR OF PHILOSOPHY

Department of Administration and
Higher Education

1976

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This study is dedicated to Dr. William Sweetland,
Professor, Department of Administration and Higher
Education, for his sincere efforts of encouragement
and guidance throughout my graduate years at
Michigan State University.

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CHAPTER I

THE PROBLEM

Need for the Study

In the development of community junior college organizational structures, departments were formed to accommodate a diversified curriculum in the following areas: two-year transfer programs, occupational-vocational programs, adult continuing education and community development programs. Departments such as natural science, applied technology, performing arts, and community resource centers are examples of departments found in community junior colleges.

Central to this departmentalization pattern is the need to attain institutional and departmental goals through the administrative functions and performance objectives of department chairpersons. Although the administrative functions and performance objectives of community junior college presidents, vice-presidents, deans, other upper echelon administrators and faculty have been researched (Lynam, 1970; Davies, 1970; Pierce, 1973), little information exists about the administrative functions of the department chairperson.



Studies have been conducted that have identified specific administrative role expectations for department chairpersons. However, these studies have also indicated that disagreement in perceptions exists among department faculty, department chairpersons, and upper echelon administrators about the chairperson's role (Smith, 1970; Anthony, 1972; Ravetch, 1972; Freligh, 1973; Lombardi, 1974).

Recently, community junior colleges have become involved in collective bargaining as a result of faculty membership in labor unions. As a result, many community junior colleges are faced with the question of whether or not the department chairperson should be a part of the faculty or of the administrative bargaining unit. Such institutions are seeking information through institutional self-studies and other research on the administrative role expectations of department chairpersons.

It is the intention of the investigator that this study be received as a practical approach to developing better organizational management, and that the findings described herein will lend themselves to clarifying the administrative functions of community junior college department chairpersons.

Statement of the Problem

In order for the community junior college to function as a total system, the subsystems or departments

Results have been submitted for the following
 specific assignments and are as follows:

1. Assignment

that comprise each institution must be defined in terms of their objectives as departments as well as in terms of the role expectations of department faculty, department chairpersons, and upper echelon administrators. The administrative head of each department (i.e., the department chairperson) must perform job activities that allow for open communication in coordinating departmental and institutional activities. However, in many cases role expectations are not clearly defined, and chairpersons are hindered in their efforts to manage a department successfully.

Purpose of the Study

The purpose of this study is:

A. To generate a set of administrative functions from duty statements and role expectations found in the research literature that describe what administrative activities the department chairperson should perform in the community junior college.

B. To examine the perceived validity of the generated administrative functions, using a survey questionnaire, by sampling department faculty, department chairpersons and upper echelon administrators in selected Michigan community junior colleges.

C. To express the generated administrative functions as performance objectives that describe what

That complete self-realization must be defined in terms
of their objectives as departments as well as in terms
of the role expectations of department faculty. Depart-

the department chairperson should be able to do, the conditions under which performance is to be done, and the level of performance to be attained in completing the activity.

Limitations of the Study

The scope of this study will be limited to selected public, community junior colleges in Michigan. Department chairpersons, faculty members, and upper echelon administrations who participated in this study were from academic departments within liberal arts colleges and divisions.

Definition of Terms

The following terms are defined according to their usage throughout this study:

Actual administrative behavior: The extent to which department faculty, department chairpersons, and upper echelon administrators perceive the department chairperson as doing or not doing the administrative tasks developed in this study.

Administrative function: An administrative activity performed in carrying out the department chairperson's role within the department; e.g., working cooperatively with faculty and deans in developing long- and short-range plans for curriculum.



Community junior college: A public, two-year institution of higher education granting the associate degree, providing certification in vocational-occupational fields, and programs for adult continuing education, and cooperating with other agencies in providing community development programs.

Department: A unit concerned with instruction and community service in specific academic disciplines.

Department chairperson: An administrator responsible for the functions of a department within the structure of the institution's higher administration.

Desired administrative behavior: The extent to which department faculty, department chairpersons and upper echelon administrators feel department chairpersons should or should not be doing the administrative tasks developed in this study.

Division: An academic unit concerned with instruction and community service in a cluster of subject-matter disciplines or an academic unit into which are combined the subject-matter of two or more related departments.

Expectation: An evaluative standard applied to an individual holding a position.

Performance objective: A description of the administrative tasks the department chairperson should

be able to do, the conditions under which tasks are to be carried out, and the level of performance to be attained in completing the tasks.

Position: The location of an individual in a system of social relationships.

Role: A set of expectations applied to an individual in a particular position.

Upper echelon administrator: An administrative officer above department chairperson with the title of assistant dean, associate dean, dean, provost, vice-president, and/or president.

Focus of the Study

In this study, the primary focus will be to test theoretically derived hypotheses involving the expectations of the department chairperson in community junior colleges. The following hypotheses will be tested to determine the role expectations of the department chairperson:

Hypothesis I: There is no interaction in perceptions among department faculty, department chairpersons, and upper echelon administrators toward definition of the department chairperson's administrative functions.

Hypothesis II: There are no differences among department faculty, department chairpersons, and upper echelon administrator perceptions of the department chairperson's administrative functions.



Hypothesis III: There are no differences among department faculty, department chairpersons, and upper echelon administrators between perceptions of the department chairperson's actual and desired administrative functions.

Assumptions for the Study

Assumptions for the study include the following:

A. A set of administrative functions can be generated for the position of department chairperson from the research literature.

B. Administrative functions can be expressed as performance objectives relative to the job activities of Michigan community junior college department chairpersons in liberal arts colleges and/or divisions.

C. Administrative functions and performance objectives related to the job activities of department chairpersons will further clarify the chairperson's role in the community junior college.

D. Administrative functions and performance objectives concerning job activities of department chairpersons can facilitate the processes of evaluation, promotion, recruitment, and salary determination.

Organization of the Study

This study is structured according to the following plan:

Hydrogen sulfide gas is a colorless, odorless, and
poisonous gas. It is formed by the decomposition of
organic matter in the absence of oxygen. It is
found in natural gas, volcanic gases, and in
the effluents of sewage treatment plants. It is
highly flammable and can form explosive mixtures
with air.

Assessments for the State

Assessments for the State include the following:

Chapter I presents the purpose of the study and a statement of the problem to be studied. The research hypotheses and assumptions for the study are also presented.

Chapter II describes the literature review and conceptual scheme for the study, and analyzes departmental characteristics.

Chapter III describes the design and methodology of the study. A description of the sample, questionnaires, development of a list of administrative functions, and data collection constitute the major sections of this chapter.

Chapter IV presents an analysis of data and statistical results in tabular and narrative form.

Chapter V contains the performance objectives generated from the set of administrative functions.

Chapter VI contains the summary, discussion, conclusions, and recommendations derived from the study.

Appendix A contains the questionnaires used in the study. Appendix B contains samples of letters used in the study. Appendix C contains the data generated in the study.

Chapter 1 presents the purpose of the study.

A statement of the problem

CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL

SCHEME FOR THE STUDY

Literature Review

Introduction

Lombardi (1972:32a-32d) described the evolution of community junior college departments and department chairpersons in his discussion of middle management patterns as follows:

Middle management patterns may be broadly classified as departmental, dimensional, and a variously-named pattern whose most common feature is a negation of the department or division based on subjects or disciplines. The oldest of these organizational patterns is the department, in which faculty and learning units are grouped by subject or discipline. At first the department was merely a convenient method of creating order out of the multitude of learning packages, and the department head was a caretaker selected by the president or his deputy to carry out routine duties and to act as an intermediary between the administration and the faculty. All of the real authority--evaluation, hiring, firing, promotion--remained with the administrators. For performing his routine function, the chairman was usually relieved of one class--but received no extra compensation. In many community junior colleges, this situation persists despite pronouncements by administrators that the chairman is a key administrator, and despite the prominence of the department chairman on the organizational charts.

A major cause of this uneven development of the chairman's position is attributable to a



close association with the high schools during the formative years of the junior colleges. Since the majority of administrators come from secondary schools, they brought many of the practices from those schools with them, one of which was the subordinate position of the department chairman. Just as the principal of a high school made most of the important decisions relating to the faculty and the departments, so did the president or dean of instruction of a junior college.

As a community college separated from the secondary schools, the faculty and administrators turned for models to higher education institutions, where the department and the chairman have higher status and more autonomy. Thus, in those institutions which developed independently, the status of the department and its chairman was gradually raised. But since this organizational transition (and status evolution) has not been completed--some colleges are still associated with high school districts--in many community junior colleges the high school practices persist, especially as they relate to their chairman's role.

Nevertheless, whether the institution is high school or university-oriented, community junior college duty statements give a chairman responsibility over such primary activities as the budget, curriculum, instructions, personnel, facilities, equipment, community relations and long-range planning.

Junior college middle management is clearly in a paradoxical position. Viewed objectively, a department is a miniature college, a unit in a cluster college. To carry out his duties, a department head acts as a surrogate not only for the dean of instruction to whom he is directly responsible, but also for the deans of student personnel, business, community services and evening division.

The Department Chairperson

The position of department chairperson in the community junior college has not received the extensive

10
The following is a list of the names of the persons who have been
admitted to the membership of the Society since the last meeting.

consideration in the areas of role definition, expectations, and development of administrative performance objectives as have presidents, vice-presidents and deans (Smith 1970:40). Although duty statements have been compiled, the results are so lengthy the reality of performing all listed functions becomes virtually impossible. Moreover, the department chairperson has come to act in an advisory capacity in recruitment, hiring, orientation, firing, salary determination, promotion, and curriculum development to academic deans, vice-presidents, and presidents.

Department chairpersons are generally selected by department faculty in periodic elections and in many institutions they serve on a rotational basis. This selection process tends to place the chairperson in a subservient position, particularly in view of the growing concept of faculty self-governance. Additionally, collective bargaining agreements have eroded the authority of department chairpersons, delineating, in master agreements, instructional and administrative activities.

The review of the literature will focus on those studies related to role expectations and behaviors of the community junior college department chairperson.

Nearly all studies of the duties performed by department chairmen include general detailed lists derived from questionnaires, collective bargaining agreements, faculty handbooks, self-studies for accreditation purposes, and other

documents. Along with the lists some investigators attempt to place the duties in random order determined by their perceptions or by analyzing those of chairmen, administrators, and experts (Lombardi, 1974).

An example of such a list of duties of the department chairperson was prepared by Anthony (1972):

A. General Administration

1. Coordinating departmental programs with objectives of the college
2. Preparing teaching schedules
3. Conducting departmental functions
4. Acting as liaison between the faculty and the administration
5. Allocating faculty office space
6. Selecting and evaluating instructional equipment and supplies
7. Coordinating departmental functions
8. Supervising the care and storage of equipment
9. Preparing the departmental budget
10. Developing college publications relating to departmental programs
11. Developing examination schedules
12. Selecting and supervising secretarial, clerical staff
13. Planning for improved facilities

B. Curriculum and Instruction

1. Developing appropriate curricula
2. Developing program objectives
3. Developing course outlines
4. Conducting programs of educational research
5. Selecting and evaluating texts and teaching materials
6. Evaluating the effectiveness of the educational program
7. Evaluating instructional aids and resources
8. Encouraging curricula and instructional experimentation
9. Developing articulation guidelines with other institutions
10. Developing a process for articulation with high schools

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core records have been
obtained at a distance of
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C. Teacher Improvement

1. Identifying prospective faculty needs
2. Recruiting and interviewing prospective faculty members
3. Recommending faculty for appointment
4. Orienting new faculty to the college program
5. Supervising and guiding faculty
6. Evaluating faculty members
7. Recommending faculty for promotion and tenure
8. Promoting faculty relations and morale
9. Assisting faculty with teaching problems
10. Encouraging professional growth of staff
11. Visiting classes and observing teaching practices

D. Student Relations

1. Establishing criteria and policies for student standards
2. Evaluating previous training of students
3. Selecting and classifying students according to ability
4. Enforcing student regulations
5. Placing students in employment
6. Counseling and advising students on programs
7. Conducting follow-up studies on students
8. Orienting new students to the program
9. Promoting student morale
10. Organizing and directing co-curricular activities

E. Community Relations

1. Developing program advisory committees
2. Organizing cooperative work experience programs
3. Making public appearances before service clubs, etc.
4. Providing advisory services to the community
5. Working with community groups to develop specific programs
6. Arranging for student and faculty visits to community institutions
7. Serving on community improvement committees

Albert Smith (1972:40-43) conducted an investigation to determine what faculty members, department chairpersons, and upper echelon administrators expected of



their chairpersons in 12 two-year Michigan community junior colleges. The major findings were presented under six functional categories:

1. Production Activities
2. Maintenance Activities
3. Boundary: Production Supportive Activities
4. Boundary: Institutional Supportive Activities
5. Adaptive Activities
6. Managerial Activities

For items presented in the questionnaire, significance was given to responses as follows: 90 percent response = highly essential job activity; 75-89 percent = essential job activity.

The significant outcomes of the investigation indicated that both faculty members, department chairpersons, and upper echelon administrators agreed that department chairpersons should not conduct research projects. There was high consensus that chairpersons should provide orientation for new faculty members in the department, involve faculty members in department decision-making and faculty evaluation. However, none of the three groups indicated any great need for student involvement in department decision-making. In terms of institutional supportive activities, there was high agreement that the department chairperson should



encourage faculty to participate in conventions, conferences, etc., and report department accomplishments to his superiors. In terms of managerial activities, the preparation of the department budget was identified as a highly essential activity by all three groups (department faculty, department chairperson and upper echelon administrators) and that the chairperson should determine the allocation of budget funds, resolve conflicts among faculty members, and review statistical data related to departmental performance.

The most significant findings were in the area of adaptive activities (those relating to long- and short-range curriculum and departmental planning and evaluation) where all three groups (department faculty, department chairperson and upper echelon administrators) perceived the department chairperson's obligations to develop long- and short-range department goals and objectives and to plan for long-range departmental equipment needs as highly essential.

Job activities listed as "highly essential" were:

1. Provides orientation for new faculty members
2. Involves faculty members in the decision-making process of the department
3. Encourages faculty to participate in conventions, conferences, professional associations, etc.

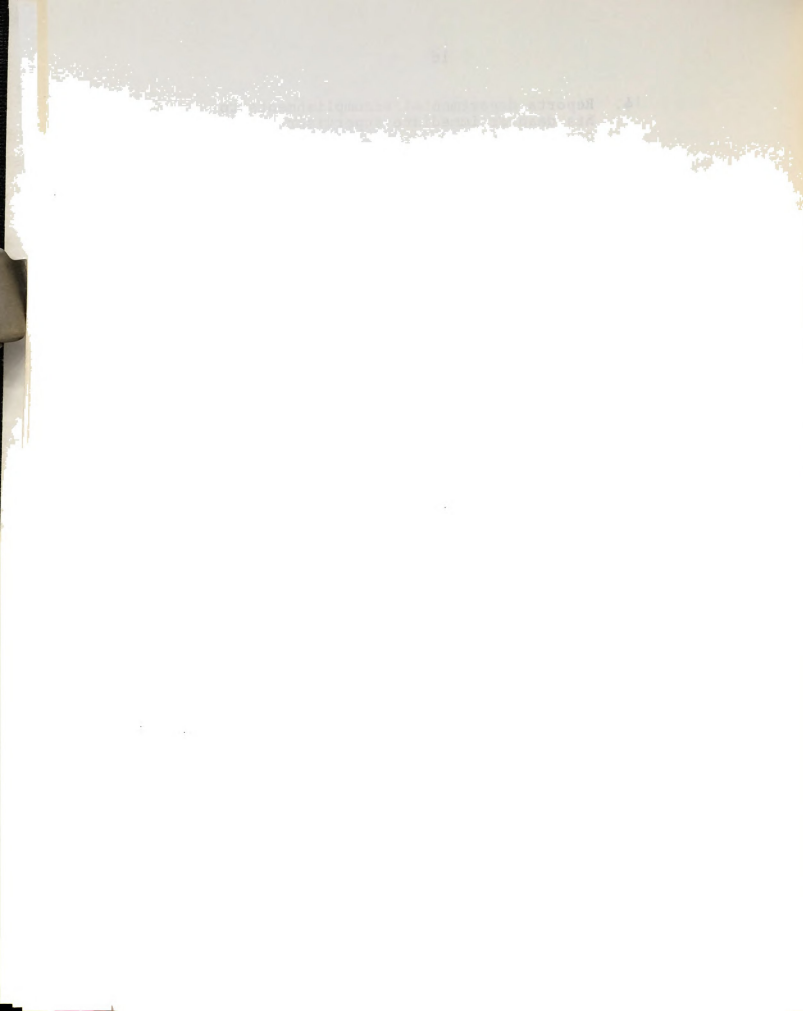


4. Reports departmental accomplishments to his dean or immediate supervisor
5. Develops and reviews long-range departmental goals and objectives
6. Plans for long-range departmental equipment needs
7. Prepares the department's budget for submission to the central administration
8. Participates in the recruitment of all full-time department faculty members

Job activities listed as "essential" were as

follows:

1. Provides orientation for new faculty members
2. Involves faculty members in the decision-making process of the department
3. Encourages faculty to participate in conventions, professional associations, etc.
4. Reports departmental accomplishments to his dean or immediate supervisor
5. Develops and reviews long-range departmental goals and objectives
6. Plans for long-range departmental equipment needs
7. Prepares the department's budget for submission to the central administration
8. Participates in the recruitment of all full-time department faculty members
9. Approves all departmental purchasing requests
10. Plans curriculum changes with the faculty for two or more years in advance



11. Reviews trends of departmental characteristics and identifies implications for departmental programs
12. Reviews new developments in departmental subject matter in other community colleges and identifies implications for department programs.
13. Oversees internal allocation of budget funds.

James O'Grady's (1971:34-36) study described and compared the role exercised by departmental chairpersons in selected small and large two-year colleges. A checklist of probable aspects of the role was field tested and served as a guide to determine questions for open-ended personal interviews. The sample consisted of: 41 chairmen from large two-year colleges (1,200 or more students) and 39 chairmen from small two-year colleges (less than 1,200 students).

The major findings were categorized as: status of the department chairperson's role, chairperson's qualifications, budget administration, personnel administration, academic administration, and general functions. The significant findings were as follows:

1. An area of difference concerned the perceived significance of administrative ability relative to size of college. More of the large college chairpersons believed their administrative ability was very important to their positions. Nearly half of the small



college chairmen responded it was of little or no importance.

2. Nearly all the large college chairpersons were nominated by the dean, approved by the college head, and appointed by the governing board. Less than half of the small college chairpersons were appointed by this method. One-third of the small college chairpersons were selected by the president and appointed by the governing board.

3. All large college chairpersons and approximately three-fourths of the small college chairpersons were responsible for budget administration and control. Nearly all large college chairpersons informed their faculty of the approved budget; less than half of the small college chairpersons so informed their faculty.

4. Nearly all the large college chairpersons indicated that they had responsibility for recruitment of faculty, screening of applicants, interviewing applicants, evaluation of teaching, and recommendations for dismissals. More than half responded they had responsibility for selection of applicants, initial salary placement, salary increase recommendations, advancement in academic rank, leaves of absence, and sabbatical leaves. Slightly more than one-fourth recommended grants for tenure. Less than one-half of the small college chairpersons had responsibility for recruitment of

College students reported it was of little or no

importance.

There is a heavy emphasis on the importance of

being recognized by the school system of the college

board, and especially the governing board. It is the

goal of the school system to be recognized by the

board of the school

and the school board

and the school board

faculty, screening, and interviewing applicants and recommending leaves of absence or sabbaticals. More than half were responsible for evaluating faculty and recommending dismissals. Less than one-fifth selected applicants, made initial salary placement, and recommended salary increases, advancement in rank, and grants of tenure.

5. Nearly all the large and small college chairpersons were required to teach at least one class and to determine courses, sections, and time schedules.

6. There were few differences between the two groups in the following areas: responsibility for maintaining personnel records on faculty and clerical staff and rosters for classes, sponsoring departmental student groups, reporting student grades, and maintaining grade books.

Clyde Blocker and William Koehline (1970:9-12) did a study to set forth a working definition of administration, describe the organization of operating divisions, and describe the role of the division chairperson within the framework of the community junior college.

They indicated that the diversified curriculum of the community junior college does not lend itself to the type of department found traditionally in four-year institutions. The authors suggested clustering courses



such as mathematics, physical science, biological science, pre-engineering and technical programs under a division of science and engineering, and organizing programs into operational divisions. Secondly, the clustering of transfer and career-oriented courses could be considered an effective way to manage polarization among faculty and administration and avoid destructive competition between the two groups.

The authors identified the division chairperson's role as managing the practical details of operating the division. The division chairperson represents the division to the community and to other divisions and colleges. He or she is responsible for preparing, reviewing, and revising materials for the division. More specifically, Blocker and Koehline see the division chairperson functioning in curriculum and instruction to the extent of:

1. Teaching
2. Evaluating faculty
3. Recommending tenure, promotion, merit pay, and dismissal
4. Supervising new courses
5. Evaluating new courses
6. Preparing schedules for courses and sections
7. Developing and maintaining standards for teaching

such as the following: "The first of the three is the most important, and the second is the most important of the first, and the third is the most important of the second."

In the area of student-oriented activities, the division chairperson works cooperatively with the dean of students:

8. Recruiting students
9. Counseling assignments
10. Assisting with student placement

And, in the area of business and financial affairs, the chairperson functions in the capacity of a manager working cooperatively with a business manager:

11. Initiating divisional budget requests
12. Preparing requisitions
13. Maintaining divisional inventory
14. Securing funds for special projects

Harmon Pierce (1971:28-31) presented a study of the role of the science division chairperson in the community junior college in which some six hundred respondents from regionally accredited community junior colleges identified fourteen areas of high task involvement. The areas were as follows:

1. Preparing annual division reports
2. Developing and revising courses
3. Scheduling courses
4. Interviewing prospective faculty
5. Evaluating instruction
6. Hiring part-time faculty
7. Preparing the divisional budget



8. Helping select texts and library materials
9. Maintaining supply and equipment inventories
10. Assigning faculty teaching loads
11. Responding to and initiating divisional correspondence
12. Articulating courses with four-year institutions
13. Setting policies and objectives for the division
14. Conducting divisional meetings

Conclusions from the Pierce study indicate that chairpersons need more authority in key areas such as faculty hiring and retention, promotion, budget, administrative planning and policy making in their curricular areas.

In his study of 173 community colleges, Anthony (1972) reported the rankings of chairpersons, immediate supervisors and experts on 51 functions. He found a high positive correlation between the experts' responses and those of the chairpersons and their supervisors. No correlation fell below .62 and the majority were in the .80 to .90 range. Since the correlations were high, the descriptions of findings will be confined to the chairpersons' responses. Department chairpersons ranked general administration, curriculum and instruction and teacher improvement as the most frequently performed and most important areas of responsibility. Student



relations and community relations ranked low in frequency of performance and in degree of importance. The five most frequently performed duties were all in the area of general administration: conducting departmental functions, preparing teaching schedules, preparing departmental budget, coordinating departmental functions and coordinating departmental programs within the objectives of the community college (Lombardi, 1974).

Of the next five rankings, number 6, developing appropriate curriculum, and 10, developing program objectives, were in the area of curriculum and instruction; number 7, identifying prospective faculty needs, 8, recruiting and interviewing prospective faculty members, and 9, recommending faculty for appointment, were in the teacher improvement area (Lombardi, 1974).

The highest ranking in the student relations area was 26, enforcing student regulations, and in the community relations area it was 25, developing program advisory committees. Among the low rankings were: 51, developing examination schedules, 50, placing students in employment, 46, organizing and directing co-curricular activities, 32, selecting and supervising clerical staff, and 31, developing college publications relating to departmental programs. Supervising the care and storage of equipment ranked 27 just below the median. Only two items in the curriculum and instruction category ranked below 30,



i.e., 48, conducting programs of educational research, and 35, developing articulation guidelines with high schools. Yet, developing guidelines with senior institutions ranked 23, an indication of the relative importance of these activities (Lombardi, 1974).

Visiting classes and observing teaching practice ranked 30, the lowest in the teacher improvement category; but evaluating faculty members ranked 12. When evaluating the importance of visiting classes, the chairman ranked it 32, indicating that not only did they not visit classes, but that they did not consider doing so important. Moreover, it may reflect the taboo of visiting classes (except those of substitute and probationary teachers), the unsatisfactory and/or different nature of the practice, or the chairperson's reluctance to rate his colleagues on classroom performance with the consequent job threat an unfavorable rating may create. Worth noting are the findings of most investigators that faculty evaluation is the most difficult duty chairpersons are expected to perform (Lombardi, 1974).

The low ratings relative to student and community relations in the Anthony study coincided with those obtained by most of the research studies reviewed. Ravetch (1972) found that only 5 percent of the chairpersons he studied counseled students and less than

1. The following information was obtained from the records of the Department of the Interior, Bureau of Land Management, regarding the land owned by the United States in the State of California:

1941-1942

15 percent conducted follow-up studies, provided career information or recruited subject area majors. Surprisingly, he found that 40 percent coordinated extra-curricular activities. Freligh (1973) observed that chairpersons are least likely to have sole responsibility for student advisement. Of Pierce's (1971) fourteen areas of high task involvement involving science division chairmen, only one, articulating courses with four-year institutions, in any way related to student or community relations.

The Community Junior College
Department: Its Character-
istics and Analysis

In order to properly describe the department chairperson, it is also important to present a description and analysis of the environment in which the chairperson functions, and to identify variables that affect the role of department chairperson.

The community junior college can be studied from a macro level in which the total organizational processes are examined, or from a micro level in which inter-intragroup departmental processes are examined. However, in either context the institution must be viewed as an organization functioning to accomplish goals and objectives. In other words, the process of goal attainment occurs at both the institutional and departmental level.

12 percent mentioned following studies. Provided correct
information on reviewed subject area within. Further
study, in detail that to review conducted within.

There are many definitions which attempt to describe the term organization. Chester Barnard (1937: 73) defines organization as "a system of consciously coordinated activities or forces of two or more persons," which implies that goal attainment is achieved through purposeful coordination of all persons involved. An example of the organizational structure of a comprehensive community junior college is illustrated in Figures 1 and 2. Scott's (1964:488) definition of organization states that:

. . . organizations are defined as collectives that have been established for the pursuit of relatively specific objectives on a more or less continuous basis. It should be clear, . . . however, that organizations have distinctive features other than goal specificity and continuity. These include relatively fixed boundaries, a normative order, authority ranks, a communication system, and an incentive system which enables various types of participants to work together in the pursuit of common goals.

This definition suggests that although organizations may function in the pursuit of goals, there are activities that occur which may not be goal-related, and which often operate in informal associations. Since this study is concerned with the organizational setting in which the department chairperson functions, Hall's (1972:9) definition of organizations will be used:

An organization is a collectivity with relatively identifiable boundary, a normative order, authority ranks, communications systems, and membership coordinating systems; the collectivity

There are many definitions which attempt to
describe the term organization. However, the most
common definition is that of an organization as
"a collection of individuals or forces of labor which
which function together and which are
responsible for the achievement of a common purpose."

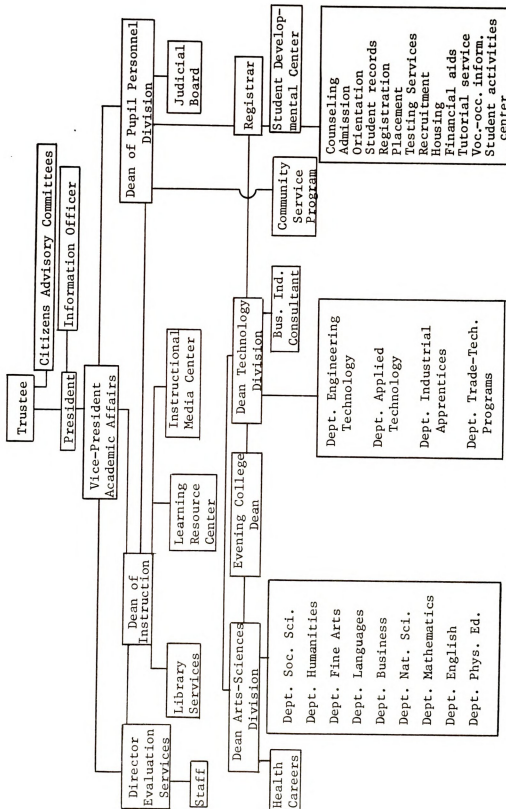


Figure 1.--An Example of Hierarchy for the Academic Division of a Community Junior College.



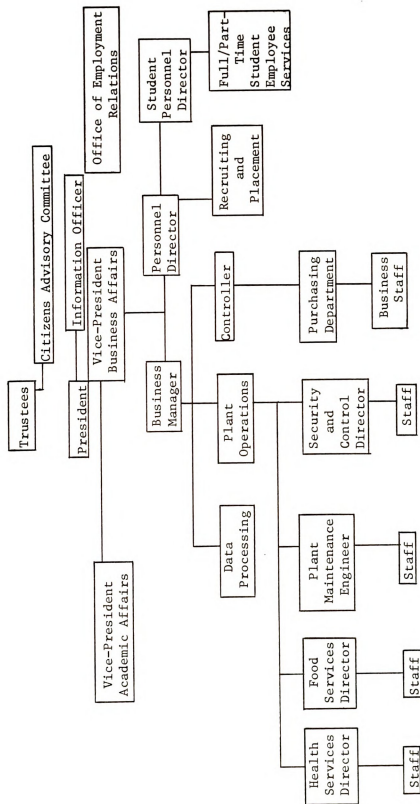


Figure 2.--An Example of Hierarchy for the Business Division of a Community Junior College.



exists on a relatively continuous basis in an environment and engages in activities that are usually related to a goal or a set of goals.

Important to the purposes of this study is the recognition that environmental factors affect organizations; i.e., inputs from the environment to the organization which are processed and released back into the environment as outputs all must reflect organizational goal attainment.

Therefore, in defining the community junior college departments, it should be recognized as a subunit of an organization and seen as functioning toward attainment of departmental as well as institutional goals. One might consider the department an organization within itself.

Relative to the process of goal attainment, Etzioni (1964:6) states that "an organizational goal is a desired state of affairs which the organization attempts to realize." It should be mentioned that consensus on goals and objectives for organizational functions is not always one hundred percent, and, from a decision-making standpoint, can present a dichotomy in organizational activity. Simon (1964:2) points out that:

When we are interested in the internal structure of an organization, however, the problem cannot be avoided Either we must explain organizational behavior in terms of the goals of the individual members of the organization, or we must postulate the existence of one or more organizational goals, over and above the goals of the individuals.

exists in a relatively low-level state of
environment and energy in relation to the
usually higher to a level of a few
important to the process of this state is the

Simon's position further enhances the focus of this study in emphasizing the need to describe and validate administrative functions and performance objectives needed by department chairpersons to attain institutional and department goals.

Charles Perrow (1961:855) takes the position that goals can be viewed from several perspectives; i.e., official and operative goals. The official goals of the department reflect departmental aims for achieving accomplishments, and operative goals are those which are translated into the policies that guide day-to-day activities. In recognizing the importance of operative goals and the subsequent translation of goal statements into administrative functions and performance objectives, Hall (1972:85) states:

. . . for the members of the organization at any level, goal determination is similarly vital. If he misses what the goals really are, his own actions may not only contribute to the organization, they may contribute to his own organizational demise.

Size is another factor that affects community junior college departments. Size, as a variable, centers on problems of control, coordination and communication. Not only are community junior college departments smaller than those in universities, but there are also diversities in activities and characteristics.

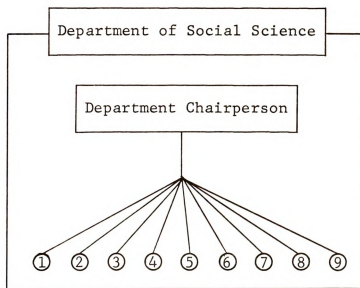
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Universities provide for four-plus years of undergraduate and graduate instruction with programs in general and specialized areas; community junior colleges provide a two-year undergraduate instructional program. University departments carry on basic and applied research, provide consultation services, and produce publications; community junior college departments develop programs primarily in the interest of community development and service. These differences in organizational activities further suggest the need for coordination and communication within both types of departments in order to assure goal attainment. Moreover, control becomes difficult as departments or subunits of large organizations begin to engage in activities that are not consistent with the upper echelons of organizational control. This problem, in particular, is significant to community junior college departments since their primary function is instructional. This becomes more apparent considering the differences in student academic backgrounds and socioeconomic profiles and how these characteristics are dealt with in the development of instructional priorities. That is, in the community junior college department, instructional priorities should be developed to accommodate a diversified student population (socially and academically). The department chairperson should serve as the instructional catalyst in



initiating and sustaining this priority. And in order to maintain or coordinate these priorities, administrative functions (specific duties) should be developed that are consistent with institutional and departmental goals that lend themselves to empirical validation.

The division of labor within community junior college departments is most likely characterized by a flat hierarchy compared to university departments. That is, the instructional and support staff is rather loosely supervised with a wide span of control (see Figure 3).



- | | | |
|-----------------------|------------------|----------------|
| (1) History | (4) Humanities | (7) Education |
| (2) Political Science | (5) Anthropology | (8) Geography |
| (3) Social Science | (6) Sociology | (9) Psychology |

Figure 3.--Community Junior College Department Span of Control.

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This structural arrangement suggests that each department contains many subunits requiring communication, coordination and control in order to effectively work toward attainment of department and institutional goals. Organizational complexity is an important issue in terms of management.

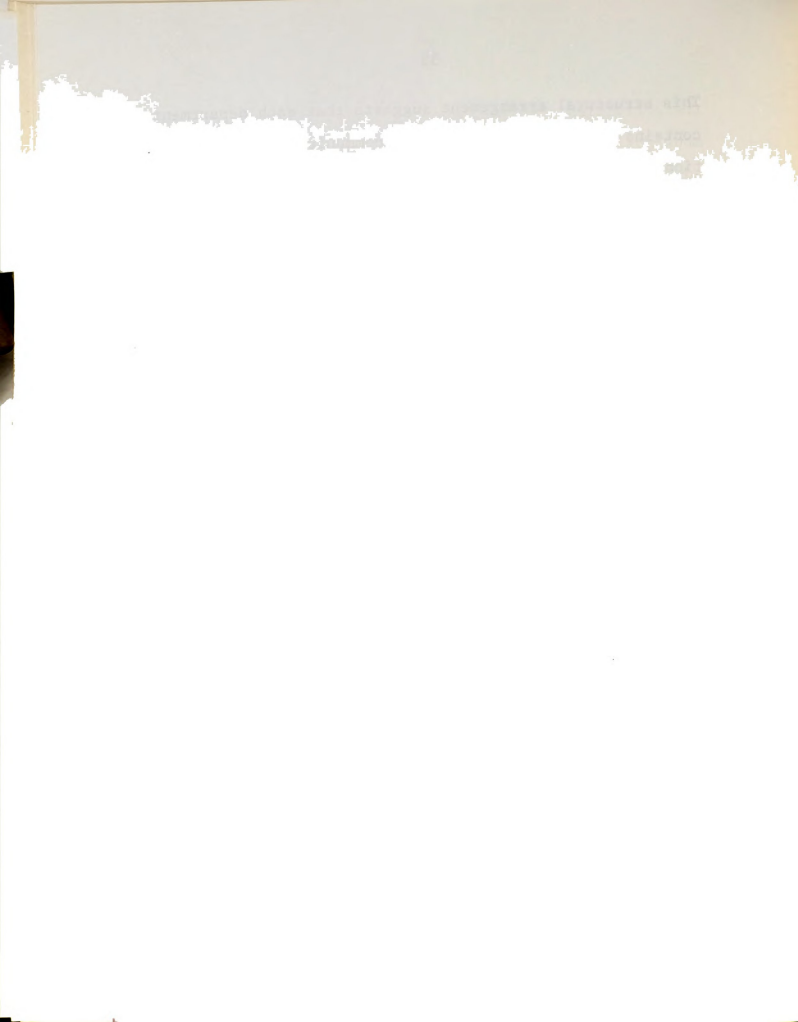
Jerald Hage (1965: 294) defines complexity as:

. . . specialization in an organization . . . measured by the number of occupational specialties and the length of training required by each. The greater the number of occupations and the longer the period of training required, the more complex the organization.

The implication is that the more training that is needed for each position, the more differentiation results among personnel. James Price (1968:26) explains:

Complexity may be defined as the degree of knowledge required to produce the output of a system. The degree of complexity of an organization can be measured by the degree of education of its members. The higher the education, the higher the complexity.

In community junior college departments where many subjects are grouped under a general area (e.g., social science), the training needed to instruct the many subjects within this department must be characterized by a great deal of diversity. And as complexity increases, the need for control and coordination becomes more important. The department chairperson becomes an important force in accomplishing the task of coordinating department activities. The task becomes more relevant when



the activities are developed along the lines of department goals and objectives and are explained in terms of administrative functions and performance objectives.

Formalization is another variable that affects the functioning of the department chairperson and the department members. Hall (1972:196) defines formalization as "the organizational technique of prescribing how, when, and by whom tasks are to be performed." The degree of formalization of expectations, therefore, affects how the members carry out the expected role and how the members condition their behavior in reacting to the organization. Hall (1972:194) further states:

From the standpoint of improving performance of individuals within the organization, increasing their morale, and improving the overall performance of the organization, the proper mix between role formalization and the personal and inter-personal characteristics has to be achieved.

What is generally expected in organizations comprised of professionals is that the professional will bring to the organization a behavior or role set which would contribute to the attainment of organizational goals. Formalization, on the other hand, is the process in which the organization describes the behavioral guidelines for the individual to ensure goal attainment.

Probably the most significant aspect of this organizational dilemma is the concept of compatibility between organizational goals and individual behavior.

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CHICAGO, ILL.

In order to minimize conflict among all levels within the organization, the existence of behavioral guidelines compatible with the organization can be a stabilizing force in maintaining the factors of organization, personality, and interpersonal relations. As this is accomplished, the individual members of the organization will begin to develop perceptions of roles at all occupational levels that will reduce stress and ambiguity. Robert Kahn (1964:31-34) presented a model that demonstrates this viewpoint (Figure 4):

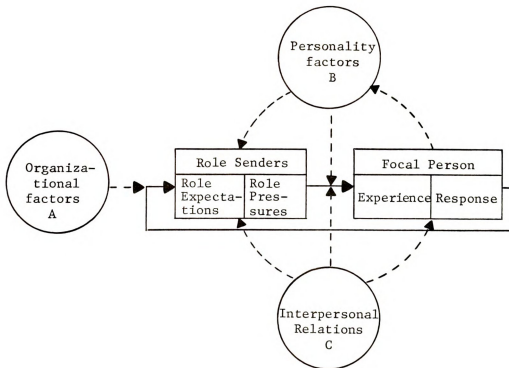


Figure 4.--Kahn's Model for Organizational Behavior.

in order to maintain the same level of security

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To a considerable extent, the role expectations held by the members of a role set--the prescriptions and proscriptions associated with a particular position--are determined by the broader organizational context. The organizational structure, the functional specialization and division of labor, and the formal reward system dictate the major content of a given office. What the occupant of that office is supposed to do, with and for whom, is given by these and other properties of the organization itself. Although other human beings are doing the "supposing" and the "rewarding," the structural properties of organizations are sufficiently stable so that they can be treated as independent of the particular persons in the role set. For such properties as size, number of echelons, and rate of growth, the justifiable abstraction of organizational properties from individual behavior is even more obvious.

The organizational circle (A) in the illustration, then represents a set of variables. Some of them characterize the organization as a whole; for example, its size, number of ranks or status levels, the products it produces, or its financial base. Other variables in this set are ecological, in that they represent the relation of a certain position or person to the organization; for example, his rank, his responsibilities for certain services in division of labor, or the number and positions of others who are directly concerned with his performance.

Arrow 3 asserts a causal relationship between various organizational variables and the role expectations and pressures which are held about and exerted toward a particular position. For example, a person in a liaison position linking two departments is likely to be subjected to many conflicting role pressures because his role set includes persons in two separate units, each having its own goals, objectives, and norms. In general, the organizational conditions surrounding and defining the positions of one's role senders will determine in part their organizational experience, their expectations, and the pressures they impose.

The personality circle (B) is used broadly to refer to all those factors that describe a person's propensities to behave in certain ways, his motives and values, his sensitivities and fears, his habits, and the like [The interpersonal

The following is a summary of the information received from the various sources mentioned above. It is to be understood that the information is not necessarily complete and that the sources mentioned are not necessarily the only ones consulted. The information is given in the form of a summary of the information received from the various sources mentioned above. It is to be understood that the information is not necessarily complete and that the sources mentioned are not necessarily the only ones consulted.

relations circle (C) refers to] the more or less stable patterns of interaction between a person and his role senders and to their orientations toward each other. These patterns of relationships may be characterized along several dimensions, some of them stemming from the formal structure of the organization, others from informal interaction and the sharing of common experiences. The following dimensions are seen as particularly important in the present context: (1) power or ability to influence; (2) affective bonds, such as respect, trust in the cooperativeness and benevolence of the other, attraction or liking; (3) dependence of one on the other; and (4) the style of communication between the focal person and his associates.

This model suggests that, for department chairpersons, organizational factors can be stabilizing forces in regard to formalization and roles if administrative functions and performance objectives are established. Moreover, as performance objectives are developed, the department chairperson (the focal person) will experience less conflict with department faculty as well as with upper echelon administrators concerning his or her own role expectations.

Leadership is another element that affects the functioning of an organization; i.e., the relationship between the department chairperson and the department faculty. Alvin Gouldner (1950:17) defines leadership as "any individual whose behavior stimulates patterning of the behavior in the same group." Etzioni (1965:690-691) expresses leadership as:

...to
... ..
... ..
... ..

. . . the ability, based on the personal qualities of the leader, to elicit the followers' voluntary compliance in a broad range of matters. Leadership is distinguished from the concept of power in that it entails influence; i.e., change of preferences, while power implies only that subject's preferences are held in abeyance.

In understanding the concept of leadership, the above definitions suggest that before any individual can be recognized as a leader, the members of the organization must first be cognizant of the leader's role or duties; specifically, what the individual is to do, to what level of performance, and the relevance of these functions to the success of the organization. Therefore, in order for the department chairperson to serve as an effective leader, it would be to the organization's advantage to develop administrative functions and performance objectives. Phillip Selznick (1957:29) further points out the importance of established roles and behaviors when he discusses the critical tasks of leadership. The first task involves the definition of the institutional (organizational) mission and role; second is the task of institutional embodiment of purposes which involves building the policy into the structure or deciding upon the means to achieve desired ends; third is to defend the organization's integrity internally and externally; and fourth is the ordering of internal conflict. Selznick points out that leadership can occur in any group or

... the ability, based on the personal qualities
of the leader, to attract the attention, confidence
or assistance in a particular situation. It is
this is distinguished from the concept of power
that is usually associated with the term. It is
more subtle power that is at work here.

Dr. Weber

organizational situation and that the above four tasks or functions can operate at all organizational levels.

Edwin Hollander and James Julian (1969:387-397) explain leadership from a perspective of interaction between leader and followers; i.e., the leader influences his followers in the interaction process and their reactions, in turn, have an impact on his own behavior. What is expected, then, is that the position of leader demands that the leader's behavior fulfill the expectations of the followers. Therefore, the leadership (chairperson) role can be enhanced and legitimized when an expressed set of administrative functions and performance objectives exist that delineate the administrative and behavioral expectations.

The purpose of this discussion has been to

- (1) examine the characteristics of community junior college departments within the context of systems theory;
- (2) point out the importance of understanding the environmental setting in which administrative and instructional activity occurs; (3) identify variables from the environment that affect departmental activity; and
- (4) substantiate the viewpoint that in order to understand the role of the community junior college department chairperson, this person must be studied within the context of the departmental setting.

Organizational structure and the
of the organization

Conceptual Scheme for the Study

Administrative Theory

The community junior college administrator, confronted with problems and issues ranging from faculty evaluation to collective bargaining, has come to rely upon past experience in developing and understanding administrative decision-making and managerial practice. In doing so, the community junior college administrator places primary emphasis on a practical approach to administration resulting, in many cases, in a bias against administrative theory. This has evolved for many administrators because of their:

1. Lack of understanding of administrative theory.
2. Inadequate professional language in terms of taxonomic consistency.
3. Interest in the factualism of research rather than practical utilization of data.
4. Suspicion of the "Authority" vested in professional researchers presenting information.

The purpose of theory is to accurately describe what is while philosophy is concerned with describing what ought to be in explaining human associations or the existence of things. However, theory is a part of philosophy since it formulates generalizations about relationships and reality. In this respect, the administrator



either consciously or unconsciously begins to perceive each situation, conflict or crisis as:

1. What ought to be
2. What really exists
3. What conclusions can be drawn from available data or facts

In order to understand the reality of a situation, the administrator invariably finds himself utilizing some aspect of administrative theory.

Administrative theory is concerned with determining the bases upon which we make decisions, particularly in the area of management. Using theory or models derived from theory, the administrator is in a position to better perceive the problem. The use of models as tools to facilitate conceptualization of situations can be discussed from a deductive approach. The individual starts with a model, derives assumptions, collects data, tests to see if his deductions are valid and then proceeds to make further deductions.

Scientific Method

The use of scientific method is a process in which problems of a purely scientific as well as social nature can be solved through man's intelligence. The process of scientific method requires the following: recognition of a problem, formulation of an hypothesis or probable explanation, determination of implications, and



observation of the experimental consequences. Through the use of this method, department chairpersons and other administrators can resolve conflicting situations of various kinds. However, chairpersons would probably need to develop programs for their staffs that present learning situations and help individuals think critically. A situation in which individuals must first recognize a problem in a given situation and then collectively define an applicable solution is a positive step towards critical thinking. This is an important tool, not only as a learning experience for a staff, but as assistance to a department chairperson in determining changes in curriculum, management techniques, etc.

A major problem, from which has stemmed the decay of organizations and even cultures, has been the failure to recognize internal and external crises that undermine a system's existence. Department chairpersons must be able to see such forces affecting their departments in order to effectively define problems regarding education and management. The recognition of all facts and data related to the problem of formulating an hypothesis is important in problem solving because it incorporates the organization of all existing factors before formulation of an explanation. The interaction of individuals on the position for and against possible solutions allows for a high degree of objectivity. Views can be exchanged



concerning the possible implications an hypothesis may have on other data or social values, resulting in a more concrete method of choosing alternatives relative to a particular conflict or problem. Consequences following the experimental act are then viewed as desirable or undesirable in relation to the original problem. Even though application of this method may fail to resolve the conflict, it can lead to another hypothesis, and the search for desirable ends begins anew.

In the case for and against scientific method, the experimentalists contend that the use of scientific method is the best process man can use in solving problems of a natural or social nature; that this process lends itself to public verification and that it is capable of resolving conflicting situations. It, therefore, transcends those intuitive approaches in which man arrives at various answers to problems but disagrees on the ultimate ends, and has no grounds for empirical demonstration. The intuitive method inevitably results in ideological deadlock. As an experimentalist, a department chairperson would advocate that values be seen in relation to other values, that no value is absolute, and that a value may be questioned as to its desirability to any time or place.

The "open-door" policy of admissions has created an issue of selective or nonselective curriculum



placement, particularly in view of the attrition rates in transfer programs. One contention is that students be placed into various programs of the community junior college as determined by the individual's entrance scores, previous high school record and interest inventory data in order to maximize educational experience (selective placement). On the other hand, many contend that not only should the community junior college practice "open-door" admissions, but also "open-door" curricula in allowing the individual the freedom to select his own educational program (nonselective placement). The department chairperson, as an experimentalist, would choose either selective or nonselective placement depending upon how the consequences of each approach furthered other desirable values. For example, in creating a more success-oriented instructional program and developing instructional objectives consistent with student academic abilities, the department chairperson could bring the concept of "open-door" admissions into a more meaningful perspective.

As in the disciplines of natural science (and recently in the social sciences), the department chairperson can work towards attaining solutions to organizational problems within the department if a common method is followed that lends itself to public verification in problem solving situations.

Systems Theory

Basically, systems theory evolves around macro-micro-theory models. Macro-theory concerns itself with the conceptual process of understanding the interrelatedness and implications of relationships in organizations as social systems. Micro-theory is more empirical and is concerned with organizational climate and leadership in the organizational process. In a more general sense, macro-micro-theory models evolved from concepts of social systems theory in which this body of knowledge was applied to organizations to better understanding organizational patterns and behaviors.

Briefly, the theory of social systems maintains that society is a large social system which is composed of many subsystems. Some of these subsystems are called organizations. Organizations are also composed of many social subsystems called departments, divisions, or branches, which are themselves composed of social subsystems. The ultimate social subsystem is the individual (Havelock, 1971:2).

Havelock (1971) defined a social system as a system of actions of individuals, the principal units of which are roles and constellations of roles. It is a system of differentiated action organized into a system of differentiated roles. In the case of the department chairperson, the administrative functions and related performance objectives serve to maintain a degree of organizational equilibrium within the department as well as in the community junior college. The consistency to

System Theory
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 Systems Theory
 of Systems Theory

which this occurs could predict the degree of goal attainment of the department and institution.

Generally, a system may be thought of merely as a set of components which act with and upon one another to bring about a state of balance or interdependence. Therefore, any change in the position or behavior of a particular component induces change in varying degrees in all other elements of the system (Havelock, 1971:2).

An operational assumption paramount to systems theory would be that of managing organizational conflict, recognizing that organizations must manage conflict in order to attain goals and objectives. System theory postulates that, if conflicts are managed, the system is said to be in balance or in a state of equilibrium; if conflicts are not managed, the system is said to be unbalanced or in a state of disequilibrium. How, then, can a department chairperson function in order to maintain organizational equilibria in areas such as long- and short-range curriculum planning, faculty evaluation, budget allocation and other related activities to attain goals and objectives of the department and institution?

Macro-Theory

The early macro-theorists such as Tönnies were concerned with understanding the transition of human associations as social systems changed from Gemeinschaft to Gesellschaft societies. Talcott Parsons extended this school of thought to describing Gemeinschaft social



relationships in organizations. Parson's Hierarchy of Organizational Control and Responsibility Model is as follows:

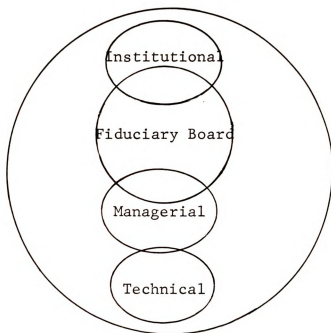


Figure 5.--Talcott Parsons' Hierarchy of Organizational Control and Responsibility Model.

Parsons identified the managerial level as a subsystem having three basic responsibilities indigenous to all organizations: (1) control over the technical subsystem (e.g., faculty); (2) procurement of personnel and materials for utilities and resources; and (3) disposition of the product. Using this schema, department chairpersons must specify administrative functions and performance objectives incumbent to their roles. Moreover, since we are concerned here with a social system

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and an explanation of social relationships within that system, it becomes imperative to translate these responsibilities into behavioral terminology.

Parsons further points out that in any organization four problems are always apparent. He refers to these as Functional Imperatives: goal attainment, adaptation, pattern maintenance-tension management and integration. He further categorizes goal attainment and adaptation as external to an organization and integration and pattern maintenance-tension management as internal to an organization. The variables are defined as follows (see Figure 6).

Goal attainment: The coordination of activities so that the system moves toward whatever goals it has set for itself.

Adaptation: The manipulation of the environment to the end of acquiring facilities needed in reaching the system's goals.

Pattern maintenance-tension management: The problem of maintaining the systems' norms and expectations consistent with the individual's social behavior or lifestyle as well as a motivational commitment to the role processes of the system.

Integration: Focuses upon the interdependence and interaction of units in the system to one another and establishing a level of solidarity to permit the system to function.

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External Relation to Environment	Continuity and Stability Over Time INSTRUMENTAL	Immediate Gratification CONSUMMATORY
	<u>Adaptation</u> Continuity and stability over time in relation to environment	<u>Goal Attainment</u> Gratification in rela- tion to environment
Internal Co-Existing of Units	<u>Pattern-Maintenance</u> Continuity and stability over time in relations among units	<u>Integration</u> Gratification in rela- tions among units

Figure 6.--Talcott Parson's Imperative Functions of Social Systems Model (Hills, 1969:21).

Parsons' model suggests that the department chairperson's position in the organizational structure of the community junior college becomes dysfunctional unless there are administrative functions and performance objectives that delineate job activities.

Bronislaw Malinowski, in his essays on the Scientific Theory of Culture (1960), proposed that in any organization all behavior is motivated and purposeful. And, in order to carry out functions consistent with the goals of the organization, specific behaviors must be identified and tested in order to verify the worth of the function (i.e., the functions as well as activities



must be explained in behavioral terms in order to be tested). The application of this model to the position of department chairperson attests to the fact that in order to evaluate the outputs of this individual in relation to departmental and institutional goals, it is necessary to first develop some prescribed expectations in behavioral terms. Malinowski's model is as follows:

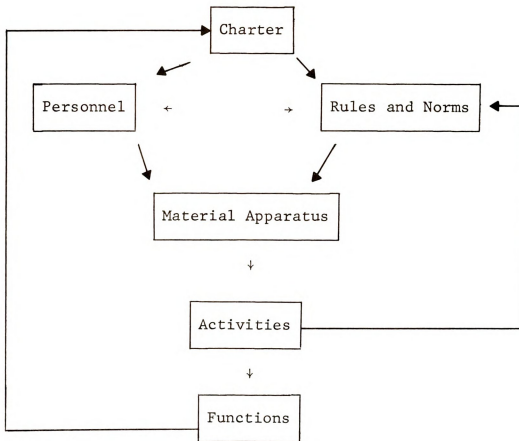


Figure 7.--Malinowski's Model for Organizational Structure.

must be explained in substantial terms in order to be
issued. The application of this model to the practice
of departmental administration is the first step in
understanding the process.

Each institution has a definite structure in which organized activity occurs. Figure 7 indicates that each institution has a charter or a system of values or goals for the pursuit of which individuals organize. The norms of the institution represent the behavioral expectations for individuals, while the personnel of an institution represent the division of labor among individuals. The material apparatus represents those objects from the environment that individuals in the organization utilize to carry out activities important to the institution. Functions become the end result or product of organized activity.

Malinowski's model points out that activities should be carried out according to the expected mode of behavior and that the functions of group activity should be consistent with the goals and objectives of the institution.

Once again, this model shows that in considering the functions of the department chairperson, activities should be carried out in a manner consistent with the expectations of department faculty and upper echelon administrators as well as with the goals of the department and institution.

Each institution has a definite character in

which organization is concerned with the

each institution

which

Micro-Theory

The research of micro-theorists has made tremendous changes in management patterns and perceptions of leadership. For example, Douglas McGregor (1969) postulated Theory X and Y orientations to understanding human motivations in organizations. Frederick Herzberg (1968) developed a comparison model of Satisfier and Dissatisfier Factors in organizational motivation. Abraham Maslow's (1965) Theory of Hierarchy of Needs identifies five basic needs in a hierarchical system that are basic sources of motivation. And Rensis Likert's (1961) lists of common goals between supervisors and subordinates in understanding group processes are but a few of many contributions researchers have made in understanding organizations and social relationships within these systems.

Role Theory

J. W. Getzels and Egan C. Guba explained behavior in a social system in terms of two interdependent dimensions: nomothetic and idiographic (see Figure 8).

The implications of the Getzels-Guba model for this study suggest that the administrative process of department management depends not only on clear statements of expectations and functions but also on the degree of overlap in perceptions of these expectations



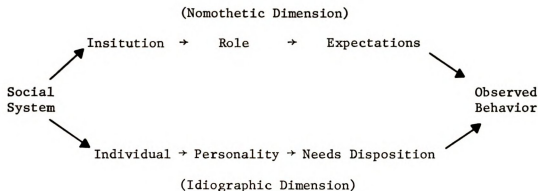


Figure 8.--Getzels-Guba Model for Organizational Behavior in a Social System. The nomothetic axis, shown at the top of the diagram, consists of institution, role, and expectation, each term being the analytic unit for the term preceding. Thus, the social system is defined by its institutions, each institution by its constituent roles, each role by the expectations attaching to it. Similarly, the idiographic axis, shown at the lower portion of the diagram, consists of individual, personality, and need-disposition, each term again serving as the analytic unit for the term preceding it (Getzels, 1966: 156-157).

and functions held by department faculty, department chairpersons, and upper echelon administrators. In other words, one way of predicting behavior (favorable or unfavorable) of department chairpersons would be to measure the degree of overlap among department faculty members, the department chairperson and upper echelon administrators relative to the expectations and functions of the position of department chairperson.

Further consideration of the Getzels-Guba model points to the nature of institutional and individual conflict:



1. Role-personality conflicts occur as a function of discrepancies between the pattern of expectations attaching a given role and the pattern of need characteristic of the role incumbent (department chairperson).

The department chairpersons, in this case of role-personality conflict, select either nomothetic expectations or fulfill their own perceptions of the role resulting in a state of mutual interference in which the nature of their behavior is incompatible with the system.

2. Role conflicts occur whenever a role incumbent is required to conform simultaneously to a number of expectations which are mutually exclusive, contradictory, or inconsistent, so that adjustment to one set of requirements makes adjustment to the other impossible or at least difficult.

In this case, the department chairperson may be expected by the department faculty to emphasize instruction but by the academic dean to work toward improving student-faculty relationships. Disorganization in the nomothetic dimension may arise when the department chairperson is expected by some faculty members to make classroom visitations yet others reject this expectation.

3. Personality conflicts occur as a function of opposing needs and dispositions within the personality of the role incumbent.

In this case, the department chairperson is at odds with the institution as a result of his/her misperception of expectations which may have resulted from the fact that these responsibilities were implied rather than presented in administrative and behavioral forms.

However, in terms of this model:

. . . these three types of conflict represent incongruence in the nomothetic dimension, in the idiographic dimension, or in the interaction between the two dimensions. Such incongruence is symptomatic of administrative failure and leads to loss in institutional and individual productivity (Getzels, 1966:162).

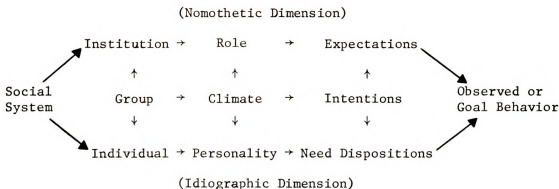


Figure 9.--Getzels-Guba Model for Organizational Behavior in a Social System with Transactional Dimension. Since both the institutional (nomothetic) and the individual (idiographic) dimensions inter-penetrate one another, an intermediate is included in the theory. This transactional dimension is a "blend" of the other two dimensions and is composed of the elements of group, climate, and intentions. The term was used to communicate the assumption that the processes within a social system may be seen as a dynamic transaction between roles and personality, and that the phenomenon of behavior includes both the socialization of personality and the personalization of roles. Thus, nomothetic and idiographic are relative rather than absolute dimensions (Sweitzer, 1969: 168).

The conceptual scheme for this study will utilize the model developed by Getzels and Guba (Getzels, 1966: 156-157) for describing organizational behavior. In viewing the community junior college as a social system having both nomothetic and idiographic dimensions, the department chairperson serves as an important component of this system. The Getzels-Guba model points out that in order for the chairperson to successfully manage the department, there must be agreement on the chairperson's departmental and institutional role expectations by department faculty, department chairpersons, and upper echelon administrators. The nomothetic and idiographic dimensions do not exist as absolute dimensions but rather exist as a system of inter-related components working together. Unless agreement exists on role expectations among department faculty, department chairpersons, and upper echelon administrators, there will be no interaction among the elements of the system which ultimately leads to conflict, loss of productivity and dysfunction. Another implication of this model for this study points out that the department chairpersons's responsibility for managing the department depends upon the chairperson's administrative behavior as perceived by the individuals of the institution and the manner in which the roles are to be carried out in attaining the goals of the department and the institution.



A final consideration of this model indicates that as the department chairperson's administrative activity is described in terms of accomplishing departmental and institutional goals, involving faculty, there is a tendency toward agreement among department faculty, department chairpersons, and upper echelon administrators.

Summary

The purpose of this review of literature was to identify findings describing duty statements and role expectations of community junior college department chairpersons made by department faculty, department chairpersons, and upper echelon administrators. This information will provide the basis from which a set of administrative functions will be generated and expressed in performance objectives.

The literature indicates that specific administrative role expectations do exist for community junior college department chairpersons. Although there is not complete agreement among department faculty, department chairpersons, and upper echelon administrators on all role expectations investigated, each study did report (as significant findings) agreement on some specific role expectations. When these are viewed collectively and grouped into specific categories according to administrative activity, the administrative nature of the department chairpersons becomes apparent.



CHAPTER III

DESIGN OF THE STUDY

Introduction

This study has two main purposes. The first is to generate a set of administrative functions for the community junior college chairperson. The second is to translate these functions into performance objectives. In this section, the methods and techniques utilized to generate and field-test the administrative functions will be explained.

Methodology: Generating the Administrative Functions

In reviewing the literature concerning the duties of community junior college department chairpersons, a list comparison procedure was used to identify the major areas of task involvement. The basic method of generating the administrative functions was through analysis of existing duty statements for community junior college department/division chairpersons. Through a procedure of cross-checking duty statements, a list was compiled that generalized the findings from the relevant literature. The second step was to group these job activities around specific areas or categories of

responsibility necessary to the functioning of the department chairperson.

Albert Smith's (1970) study identified thirteen significant job activities as follows:

1. Provide orientation for new faculty members
2. Involve faculty members in decision-making
3. Approve all purchase requests
4. Participate in the recruitment of full-time faculty
5. Encourage faculty to attend conventions, professional associations, etc.
6. Report departmental accomplishments
7. Develop long- and short-range goals and objectives
8. Plan curriculum two years in advance
9. Review trends in student characteristics
10. Review new developments in subject matter
11. Plan for long-range equipment needs
12. Prepare department budget
13. Oversee allocation of the department budget

Smith then classified these activities according to the organizational subsystems described by Katz and Kahn (1966:39-44). These subsystems are explained as:

Production subsystem--Those activities that result in product outcomes; i.e., student learning, etc.



Supportive subsystems--Those activities that carry on the environmental transaction in procuring the input or disposing of the output or aiding in these processes. The relating of the system to its larger social environment in establishing its legitimation and support would be an institutional function.

Maintenance subsystem--Concerned with inputs for maintaining or preserving the system and attaining goals and objectives.

Adaptive subsystem--Concerned with long- and short-range planning for organizational change.

Managerial subsystem--comprises the organized activities for controlling and directing the many subsystems of the structure.

Smith (1970:108-109) utilized the above organizational subsystems to categorize the areas of job activity:

Criteria I. Productive Function--These processes and activities are concerned with accomplishing the primary tasks of the department. Input is transformed into output by the chairperson's activities. In a community college department, faculty assignments would be assigned to this function.

Criteria II. Maintenance Function--These processes and activities are concerned with preserving the equilibrium of the department and college. Mediation

between task demands and human needs are accomplished by the chairperson as a maintenance function.

Criteria III. Boundary: Production Supportive Function--These activities are concerned with procuring new faculty members, and materials for the department from either the college environment or the environment external to the college. Disposing of the product (e.g., student placement) in the external environment is another aspect of the chairperson's role in this segment.

Criteria IV. Boundary: Institutional Supportive Function--Here the chairperson's activities are concerned with obtaining external social support and legitimation for his department and/or college.

Criteria V. Adaptive Function--The extent to which the department chairperson identifies and makes recommendations to his administrative superiors or to his department faculty for needed changes will determine his proficiency in this category.

Criteria VI. Managerial Function--These activities are concerned with resolving conflicts between the faculty and administration, between departments, between chairperson and faculty, and with the coordination of external requirements of the community college with departmental needs.

between cash demands and bank needs are established
 by the chairman as a permanent function.
 Officer III, Secretary, Treasurer, and
 Executive-Trustee are connected with the

Smith grouped his thirteen job activities into the above functional categories: items 1 and 2 were categorized Maintenance Activities; items 3 and 4 as Boundary: Production Supportive Activities; items 5 and 6 as Boundary: Institutional Supportive Activities; items 7, 8, 9, 10 and 11 as Adaptive Activities; and items 12 and 13 as Managerial Activities.

From 51 possible functions Anthony (1972) identified eleven areas of high responsibility most frequently performed by community college department chairpersons. He ranked them in the following order:

1. Conducting department functions
2. Preparing teaching schedules
3. Preparing department budget
4. Coordinating department functions
5. Coordinating department programs with objectives of the college
6. Developing appropriate curriculum
7. Identifying prospective faculty needs
8. Recruiting new faculty
9. Recommending faculty for appointments
10. Developing program objectives in curriculum and instruction
11. Evaluating faculty

Using Smith's "six categories" the item ranked No. 2 would correspond to a Production Activity; items Nos. 7, 9, and 11 correspond to Smith's 1 and 2 as Maintenance

which should be placed in the following order:

1. The above information
2. The above information
3. The above information
4. The above information

Activities; items ranked Nos. 4 and 8 correspond to Smith's items 3 and 4, Boundary: Production Supportive Activities; items ranked Nos. 5, 6, and 10 correspond to Smith's items 7, 8, 9, 10 and 11 as Adaptive Activities; and items ranked Nos. 1 and 3 correspond to Smith's items 12 and 13 as Managerial Activities.

The following findings as reported by Pierce (1971) and the study by Blocker and Koehline (1970) will be presented as they relate to Smith's "six categories" of department chairperson's activities.

Harmon Pierce (1971:28-31) identified fourteen areas of "high task involvement" as to the role expectations of community junior college division chairperson as follows:

1. Preparing division reports
2. Developing and revising courses
3. Scheduling courses
4. Interviewing prospective faculty
5. Evaluating instruction
6. Hiring part-time faculty
7. Preparing divisional report
8. Helping select textbooks and library materials
9. Maintaining supply and equipment inventories
10. Assigning faculty to teaching loads
11. Preparing divisional correspondence

1940-1941

Smith's River 3

1941-1942

1942-1943

12. Articulating courses with four-year institutions
13. Setting policies and objectives for the division
14. Conducting divisional meetings

Item 10 corresponds to Production Activity; item 5, to Maintenance Activity; items 4, 6, 8 and 9, to Boundary: Production Supportive Activities; items 1, 11, as Boundary: Institutional Supportive Activities; items 2, 12, 13, as Adaptive Activities; and items 3, 7, and 14, as Managerial Activities.

Blocker and Koehline (1970:9-12) identified the role of the division chairperson as follows:

1. Teaching
2. Evaluating faculty
3. Making recommendations for tenure, promotion, merit pay, and dismissal
4. Supervising new courses
5. Evaluating new courses
6. Preparing schedules for courses and sections
7. Developing and maintaining standards for teaching
8. Recruiting students
9. Counseling assignments
10. Assisting with student placement
11. Initiating divisional budget requests
12. Preparing requisitions

12. Anticipated changes with four-year
master's program

13. Maintaining divisional inventory

14. Securing funds for special projects

Using the same procedure for categorizing activities of the chairman, items 1 and 9 correspond to Production Activities; items 2, 3, 5, 7 and 8, as Maintenance Activities; items 10, 12 and 13, as Boundary: Production Supportive Activities; item 14, as Boundary: Institutional Supportive Activity; item 4, as an Adaptive Activity; and items 6 and 11, as Managerial Activities.

In summary, the findings of the related research and literature suggest a commonality in role expectations for community junior college department chairpersons. Furthermore, these similarities in role expectations all lend themselves to being grouped into categories as functional activities within the departmental organizational structure.

The next procedure in generating a set of administrative functions was to analyze the significant administrative tasks for the chairperson, and then categorize them into appropriate subsystems as described by Katz and Kahn (1966:39-44).

Generated Administrative Role Functions

The following administrative activities represent the Department Chairperson's Administrative Functions that were generated from the review of literature for this study.

Administrative Function for Production Activities
--Prepares and makes faculty assignments, complies

13. Maintaining historical inventory

14. Research and special projects

15. Other

16. Other

17. Other

18. Other

with guidelines for class size in making class assignments, consults with faculty in determining class assignments.

Administrative Function for Maintenance Activities--Works cooperatively with faculty in evaluating instructors for tenure. Facilitates the orientation of new faculty members; conducts department self-studies to determine faculty and departmental needs; recommends the appointment, promotion, or dismissal of faculty based on merit and performance alone; provides means for open communication between faculty and department decision-making concerning instructional planning.

Administrative Function for Boundary: Production Supportive Activities--Recruits, interviews, and hires full- and part-time faculty; maintains department inventories of supplies and equipment; manages the preparation and approval of all department purchase requisitions; involves faculty in the hiring of new faculty members; and cooperates with researchers who are attempting to advance knowledge in the field.

Administrative Function for Boundary: Institutional Supportive Activities--Communicates to faculty changes in administrative policy; encourages faculty to attend professional meetings, seminars and workshops to facilitate professional growth; prepares and interprets reports to faculty and administration of departmental



accomplishments; and participates effectively as a member of the divisional academic councils and college committees.

Administrative Function for Adaptive Activities--
Initiates and reviews new developments in curriculum for the department, reviews trends on student characteristics within the department and college, develops long- and short-range instructional goals and objectives for the department consistent with the philosophy of the college, works cooperatively with faculty in developing departmental goals and objectives, provides for student input in developing department goals and objectives, articulates departmental courses and programs with four-year institutions to facilitate transfer and curriculum development, and works cooperatively with faculty and deans in developing long- and short-range plans for curriculum.

Administrative Function for Managerial Activities
--Works cooperatively with faculty in determining scheduling of courses; gives more consideration to cost factors than educational needs in preparing the department budget; involves department faculty in determining allocation of the department budget; prepares the department budget and oversees its allocation; consults with faculty about filling vacancies in the department; complies with guidelines for reviewing initial grievance requests by

faculty; works effectively to resolve student-instructor conflicts within the department; manages the resolution of student problems arising out of scheduling conflicts, late registration, drop-and-add card requests, etc.; fosters coordination and mutual understanding between departments of the college; and prepares and oversees the preparation of grant proposals to federal, state and local agencies from the department.

The above six categories of administrative functions were listed in three separate questionnaires and submitted to department faculty, department chairpersons, and upper echelon administrators to determine their importance relative to the department chairperson's administrative role expectations.

Procedure

The purpose of this section will be to describe how the population was sampled, the procedure for collecting data, and the design of the questionnaire.

Determination of the Population Sampled

The population for this study consisted of ten community junior colleges in Michigan having department chairpersons in their Liberal Arts College/Division. The population was determined by contacting the dean of instruction, vice-president for academic affairs or the

president of all 29 community junior colleges in Michigan to ask if their institution's organizational structure contained department chairpersons as defined in this study.

Design of the Questionnaire

Using a survey questionnaire approach, it was assumed that a structured questionnaire approach would assure uniformity from one individual or department to another for comparative purposes. The purpose of the questionnaire was to ask department faculty, department chairpersons, and upper echelon administrators to respond to the 35 administrative activities (grouped under the six administrative role functions) to indicate the extent to which they felt department chairpersons were or were not doing these tasks, i.e., actual administrative behavior. They also were asked to indicate the extent to which they felt department chairpersons should or should not be doing these tasks, i.e., desired administrative behavior. Department chairpersons were asked to respond to the same set of 35 administrative activities indicating their actual and desired perceptions of their administrative behavior. Respondents were asked to circle the number indicating their response to each of the 35 administrative activities under the two categories of actual administrative behavior and desired administrative behavior of the department chairperson.

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As a pilot study, the questionnaire was distributed to community junior college instructors and administrators after which adjustments were made prior to the mailing of the instrument to the participating community junior colleges.

Collection of Data

A letter of inquiry was sent to the president of each of the ten community junior colleges having department chairpersons as indicated by the administrator of each institution. The letter described the purpose of the study and asked their support in allowing their institution to participate. A follow-up phone call was made to each president to solicit his institution's response (approximately two weeks after the letter of inquiry), and to request the names of those departments that would be participating in the study. Seven of the ten community junior colleges agreed to participate. The survey questionnaires for department faculty, department chairpersons, and upper echelon administrators were sent to each president's office to be distributed to the participants. Each participant returned the questionnaire by mail using a post-paid envelope. A follow-up phone call was made to each president whose faculty had less than a 50 percent return approximately three weeks after the questionnaires had been sent to the participating



colleges. After an additional three weeks, presidents were again contacted to inquire if more questionnaires were needed for nonresponding participants. The sample consisted of all usable questionnaires from upper echelon administrators, department faculty, and department chairpersons from the seven participating community junior colleges in Michigan. Those departments with less than a 50 percent response were not included in the study.

Experimental Design

A 3 x 2 design matrix was constructed for the tests of the three hypotheses. A total of 232 subjects participated in the experiment. The subjects were distributed unequally within the six cell matrix.

TABLE 1.--Experimental Design Matrix Presenting Levels of Variables, Cells, and Total N's.

Position	Test T ₁	Test T ₂
	Actual Administrative Behavior	Desired Administrative Behavior
UEA	N = 8	N = 8
DC	N = 27	N = 27
DF	N = 197	N = 197

UEA = Upper echelon administrator

DC = Department chairperson

DF = Department faculty

colleges after an additional year of study.

There is also a

very

Statistical Procedures

The data were keypunched and verified at the Michigan State University Computer Center. The statistical analyses were calculated on the Michigan State University CDC 6500 Computer.

The FINN Program (Finn, 1967) was used for the testing of hypotheses. This program was selected because it allowed the investigator to analyze the multivariate data in this study.

The SPSS Program, Statistical Package for Social Science (Nie, 1975), was used to transform the data from raw scores to group scores for hypothesis testing, and to generate mean scores, standard deviation scores, and to estimate the confidence interval of mean scores for the department chairperson's administrative functions. The SPSS Program was also used to generate Pearson correlation coefficients and frequency tables.

CHAPTER IV

ANALYSIS OF DATA

The results of the analysis of data for the three hypotheses are presented in this chapter. The hypotheses are as follows:

- H_I: There is no significant interaction between department chairpersons, department faculty and upper echelon administrators concerning perceptions of the department chairperson's administrative functions.
- H_{II}: There is no significant difference among the groups of respondents of department chairpersons, department faculty, and upper echelon administrators' perceptions for the department chairperson's actual (T₁) and desired (T₂) administrative functions.
- H_{III}: There is no significant difference between tests for the department chairperson's actual (T₁) and desired (T₂) administrative functions.

The hypotheses were stated in the null form and were tested by a multivariate analysis of variance of repeated measurements.

A 3 x 2 design matrix, constructed for the tests of the three hypotheses, is presented in Figure 10.

Hypothesis Testing

The testing of the three hypotheses was done on the Michigan State University CDC 6500 computer using the



		Test	
		T ₁	T ₂
Position	UEA		
	DC		
	DF		

UEA = Upper echelon administrator
 DC = Department chairperson
 DF = Department faculty
 T₁ = Actual behavior scores for DC administrative activities
 T₂ = Desired behavior scores for DC administrative activities

Figure 10.--Design Matrix.

FINN program. The mean scores, range, variance, standard deviation scores, and confidence intervals scores were determined using the SPSS program. An alpha level of .05 was selected to determine the level of statistical significance for data analysis in this study.

In summary, after testing the three hypotheses, the Test Effect (H_{III}) was the only hypothesis that was statistically significant at the .05 level. Therefore, the null Hypothesis III was rejected and it is concluded there is a significant difference between T₁ and T₂ across the three Positions.



TABLE 2.--Summary Table of Multivariate Analysis of Variance of Repeated Measures (3 x 2).

Source of Variation	df	F-Test	p <
Test effect (H_{III})	1	253.8786	.0001*
Position effect (H_{II})	2	2.4300	.0987
Test x position (H_I)	2	.1979	.8206

*The test is statistically significant at $\alpha = .05$.

The results of the hypothesis testing indicated no significant interaction between Positions and Tests (H_I), and no significant difference among the Positions (H_{II}) across T_1 and T_2 . Since the Test Effect (H_{III}) was significant it was meaningful to look at the estimation interval of a particular position on T_1 and T_2 to determine the inclination of each particular position about T_1 and T_2 .

Using the questionnaire, upper echelon administrators, department chairpersons, and department faculty based their selection of the department chairperson's actual and desired behavior from the following two categories:

Actual Behavior (T_1)

1. Always performs
2. Generally performs
3. May or may not perform
4. Usually does not perform
5. Never performs

Desired Behavior (T_2)

1. Highly desired
2. Generally desired
3. May or may not be desired
4. Usually not desired
5. Not desired

The mean scores from the questionnaire responses were applied to the following scale to determine the upper echelon administrators', department chairpersons', and department faculty's range of responses for the department chairperson's administrative activities:

- A. Those mean scores within the range of 1-2.5 were considered as being within the range of acceptance.
- B. Those mean scores within the range of 2.6-3.4 were considered as being within the range of uncertainty.
- C. Those mean scores within the range of 3.5-5.0 were considered as being within the range of rejection.

TABLE 3.--UEA, DC, and DF Total Mean Actual Behavior Scores for Department Chairperson's Administrative Functions.

	Mean	Standard Deviation	95% Conf. Int. for Mean
UEA (n = 8)	2.3075	.5848	1.8186 to 2.7964
DC (n = 27)	2.0419	.3581	1.9002 to 2.1835
DF (n = 197)	2.1572	.5233	2.0836 to 2.2307
Total (n = 232) Ungrouped data	2.1489	.5094	2.0830 to 2.2148

The range of response of the total mean actual behavior scores demonstrated that the upper echelon administrator, department chairperson, and department faculty perceptions were in the "Generally Performs" category

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which indicates that the six administrative functions described in the questionnaire are generally performed by department chairpersons; ungrouped data 95 percent confidence interval = 2.0830 to 2.2148.

TABLE 4.--UEA, DC, and DF Total Mean Desired Behavior Scores for Department Chairperson's Administrative Functions.

	Mean	Standard Deviation	95% Conf. Int. for Mean
UEA (n = 8)	1.5788	.3460	1.2895 to 1.8680
DC (n = 27)	1.6948	.3593	1.5527 to 1.8369
DF (n = 197)	1.6690	.3693	1.6171 to 1.7209
Total (n = 232) Ungrouped data	1.6689	.3664	1.6215 to 1.7163

The range of response of the total mean desired behavior scores demonstrated that upper echelon administrators, department chairpersons, and department faculty considered the six administrative functions to be Highly Desired activities and acceptable tasks for department chairpersons; ungrouped data 95 percent confidence interval = 1.6215 to 1.7163. Tables 5 and 6 show the confidence interval for actual and desired mean scores by position (UEA, DC, and DF) and administrative function (A_1 - A_6 , and D_1 - D_6).



TABLE 5.--Pearson Correlation Coefficients Between Actual and Desired Behavior Scores of the Department Chairperson's Administrative Functions as Perceived by Upper Echelon Administrators.

Subscale	Pearson Correlation Coefficient	p <
1. Administrative function for production activities	.7310	.020*
2. Administrative function for maintenance activities	.8739	.002*
3. Administrative function for boundary: production supportive activities	.7546	.015*
4. Administrative function for boundary: institutional supportive activities	.6741	.033*
5. Administrative function for adaptive activities	.5400	.084*
6. Administrative function for managerial activities	.7198	.022*
Total	.7348	.019*

*The test is statistically significant at .05 level.

TABLE 2--Pearson Correlation Coefficients Between Actual
and Predicted Relative Scores of the Government
Chairpersons and the Relative Scores
of the Government's

Side

TABLE 6.--Pearson Correlation Coefficients Between Actual and Desired Behavior Scores of the Department Chairperson's Administrative Functions as Perceived by Department Chairpersons.

Subscale	Pearson Correlation Coefficient	p <
1. Administrative function for production activities	.3405	.041*
2. Administrative function for maintenance activities	.3755	.027*
3. Administrative function for boundary: production supportive activities	.7195	.001*
4. Administrative function for boundary: institutional supportive activities	.5549	.001*
5. Administrative function for adaptive activities	.5910	.001*
6. Administrative function for managerial activities	.5517	.001*
Total	.4387	.011*

*The test is statistically significant at the .05 level.

TABLE 1--Pearson Correlation Coefficients between Age and Height, Weight, and Chest Girth of the Subjects

Variable	Age	Height	Weight	Chest Girth
Age	1.00			
Height	0.75	1.00		
Weight	0.65	0.85	1.00	
Chest Girth	0.60	0.80	0.70	1.00

TABLE 7.--Pearson Correlation Coefficients Between Actual and Desired Behavior Scores of the Department Chairperson's Administrative Functions As Perceived by Department Faculty.

Subscale	Pearson Correlation Coefficient	p <
1. Administrative function for production activities	.7067	.001*
2. Administrative function for maintenance activities	.4991	.001*
3. Administrative function for boundary: production supportive activities	.4536	.001*
4. Administrative function for boundary: institutional supportive activities	.4334	.001*
5. Administrative function for adaptive activities	.3560	.001*
6. Administrative function for managerial activities	.4904	.001*
Total	.4896	.001*

*The test is statistically significant at the .05 level.

The preceding correlation coefficients between actual and desired behavior scores on six subscales of the department chairperson's administrative functions were calculated for upper echelon administrators, department chairpersons, and department faculty. All the correlation coefficients were significant at the .05 level.

The purpose for calculating the correlation coefficients was to determine the level of agreement on the department chairperson's six administrative functions of T_1 and T_2 for a particular position.

An item analysis was conducted to determine how department faculty, department chairpersons, and upper echelon administrators perceived the 35 administrative tasks as being important activities for the department chairperson. Tables 8 and 9 which follow will show the perceptual responses of faculty, department chairpersons, and upper echelon administrators for the department chairperson's actual and desired administrative behavior.

From Table 9, where the total average response from department faculty, department chairpersons, and upper echelon administrators was 90% or more in the Highly Desired-Generally Desired categories for a task, the administrative task was then identified as being an important activity for the department chairperson to

TABLE 8.—Percent Responses from Upper Echelon Administrators,
Department Chairpersons, and Faculty Considering the 35
Administrative Tasks as Being Always Performed or Generally
Performed by Department Chairpersons.

Item	DF	DC	UEA
<u>Administrative Function for Production Activities</u>			
1. Prepares and makes faculty assignments.	71.6	81.9	75.0
2. Complies with guidelines for class size in making class assignments.	85.3	82.6	100.0
3. Consults with faculty in determining class assignments.	73.7	100.0	62.5
<u>Administrative Function for Maintenance Activities</u>			
4. Works cooperatively with faculty in evaluating instructors for tenure.	68.0	59.0	50.0
5. Facilitates the orientation of new faculty members.	74.1	81.4	62.5
6. Conducts department self-studies to determine faculty and departmental needs.	52.3	62.9	50.0
7. Recommends the appointment, promotion or dismissal of faculty based on merit and performance alone.	57.9	55.5	62.5
8. Provides a means for open communication between faculty and department chairman.	82.3	92.6	62.5
9. Allows for faculty input in department decision-making concerning instructional planning.	84.2	92.6	75.0
<u>Administrative Function for Boundary: Production Supportive Activities</u>			
10. Recruits, interviews and hires full and part time faculty.	68.0	70.3	50.0
11. Maintains department inventories of supplies and equipment.	56.8	77.7	50.0
12. Manages the preparation and approval of all department purchase requisitions.	80.2	88.9	87.5
13. Involves faculty in the hiring of new faculty members.	78.5	66.7	62.5
14. Cooperates with researchers who are attempting to advance knowledge in the field.	58.4	44.4	25.0

TABLE 2.—Forecasted Employment from 1980 to 1990
Department of Commerce, Bureau of Economic Analysis
Anticipated 1980-1990 Employment by Sector

Year	1980	1990
Total	100.0	100.0
Manufacturing	25.0	20.0
Services	75.0	80.0

Table 8.--Continued.

Item	DF	DC	UEA
<u>Administrative Function for Boundary: Institutional Supportive Activities</u>			
15. Communicates to faculty changes in administrative policy.	78.1	88.8	62.5
16. Encourages faculty to attend professional meetings, seminars and workshops to facilitate professional growth.	70.6	85.2	62.5
17. Prepares and interprets reports to faculty and administration of departmental accomplishments.	69.0	74.0	37.5
18. Participates effectively as a member of the divisional academic councils and college committees.	83.2	85.1	87.5
<u>Administrative Function for Adaptive Activities</u>			
19. Initiates and reviews new developments in curriculum for the departments.	52.7	66.7	25.0
20. Reviews trends on student characteristics within the department and college.	37.1	62.9	12.5
21. Develops long and short range instructional goals and objectives for the department consistent with the philosophy of the college.	55.3	59.2	62.5
22. Works cooperatively with faculty in developing departmental goals and objectives.	67.0	77.7	75.0
23. Provides for student input in developing departmental goals and objectives.	35.5	33.3	00.0
24. Articulates departmental courses and programs with four-year institutions to facilitate transfer and curriculum development.	58.4	51.8	25.0
25. Works cooperatively with faculty and deans in developing long and short range plans for curriculum.	73.1	74.0	75.0

Table 8.--Continued.

Item	DF	DC	UEA
<u>Administrative Function for Managerial Activities</u>			
26. Works cooperatively with faculty in determining scheduling of courses.	85.3	96.3	75.0
27. Gives more consideration to cost factors than educational needs in preparing the department budget.	16.2	7.4	25.0
28. Involves department faculty in determining allocating of the department budget.	50.2	51.8	37.5
29. Works effectively to resolve student-instructor conflicts within the department.	70.0	81.5	87.5
30. Consults with faculty about filling vacancies in the department.	66.5	81.5	62.5
31. Complies with guidelines for reviewing initial grievance requests by faculty.	73.1	70.4	75.0
32. Prepares the department budget and oversees its allocation.	81.7	85.2	75.0
33. Manages the resolution of student problems arising out of scheduling conflicts, late registration, drop and add card requests, etc.	59.9	77.7	50.0
34. Fosters coordination and mutual understanding between departments of the college.	67.0	74.0	75.0
35. Prepares and oversees the preparation of grant proposals to Federal, state, and local agencies from the department.	21.3	18.5	12.5

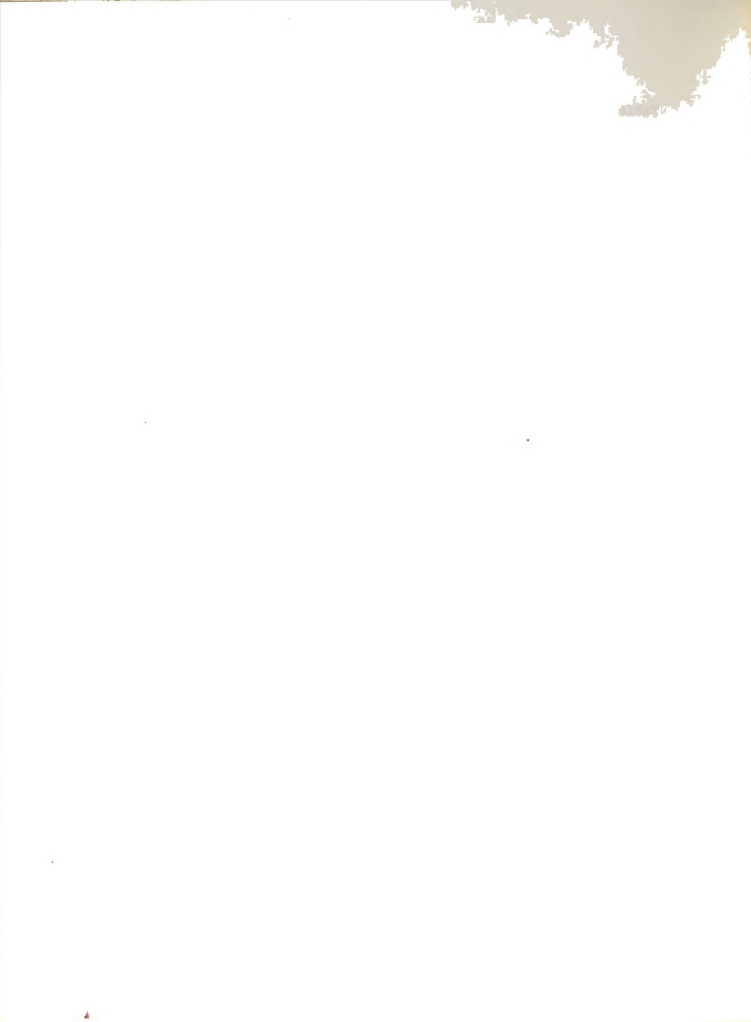


TABLE 9.--Percent Responses from Upper Echelon Administrators, Department Chairpersons, and Faculty Considering the 35 Administrative Tasks to Be Highly Desired to Generally Desired for Department Chairpersons.

Item	DF	DC	UEA
<u>Administrative Function for Production Activities</u>			
1. Prepares and makes faculty assignments.	70.5	81.5	87.5
2. Complies with guidelines for class size in making class assignments.	89.3	96.3	100.0
3. Consults with faculty in determining class assignments.	91.8	88.9	100.0
<u>Administrative Function for Maintenance Activities</u>			
4. Works cooperatively with faculty in evaluating instructors for tenure.	85.8	62.9	75.0
5. Facilitates the orientation of new faculty members.	91.4	96.3	100.0
6. Conducts department self-studies to determine faculty and departmental needs.	88.8	96.8	100.0
7. Recommends the appointment, promotion or dismissal of faculty based on merit and performance alone.	78.1	77.7	75.0
8. Provides a means for open communication between faculty and department chairman.	98.5	96.3	100.0
9. Allows for faculty input in department decision-making concerning instructional planning.	99.0	96.3	100.0
<u>Administrative Function for Boundary: Production Supportive Activities</u>			
10. Recruits, interviews and hires full and part time faculty.	78.2	77.7	87.5
11. Maintains department inventories of supplies and equipment.	72.1	62.9	62.5
12. Manages the preparation and approval of all department purchase requisitions.	81.8	88.9	100.0
13. Involves faculty in the hiring of new faculty members.	89.3	74.1	62.5
14. Cooperates with researchers who are attempting to advance knowledge in the field.	74.1	55.5	62.5

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Table 9.--Continued.

Item	DF	DC	UEA
<u>Administrative Function for Boundary:</u>			
<u>Institutional Supportive Activities</u>			
15. Communicates to faculty changes in administrative policy.	96.5	96.3	100.0
16. Encourages faculty to attend professional meetings, seminars and workshops to facilitate professional growth.	90.9	88.9	100.0
17. Prepares and interprets reports to faculty and administration of departmental accomplishments.	91.3	81.5	100.0
18. Participates effectively as a member of the divisional academic councils and college committees.	97.4	88.9	100.0
<u>Administrative Function for Adaptive Activities</u>			
19. Initiates and reviews new developments in curriculum for the departments.	85.3	77.8	87.5
20. Reviews trends on student characteristics within the department and college.	82.7	85.1	87.5
21. Develops long and short range instructional goals and objectives for the department consistent with the philosophy of the college.	81.7	74.1	100.0
22. Works cooperatively with faculty in developing departmental goals and objectives.	92.9	88.9	100.0
23. Provides for student input in developing departmental goals and objectives.	69.5	62.9	62.5
24. Articulates departmental courses and programs with four-year institutions to facilitate transfer and curriculum development.	87.8	66.6	62.5
25. Works cooperatively with faculty and deans in developing long and short range plans for curriculum.	94.4	81.5	100.0

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Table 9.--Continued.

Item	DF	DC	UEA
<u>Administrative Function for Managerial Activities</u>			
26. Works cooperatively with faculty in determining scheduling of courses.	98.5	92.6	87.5
27. Gives more consideration to cost factors than educational needs in preparing the department budget.	8.6	18.5	37.5
28. Involves department faculty in determining allocating of the department budget.	83.2	70.3	62.5
29. Works effectively to resolve student-instructor conflicts within the department.	87.3	88.9	100.0
30. Consults with faculty about filling vacancies in the department.	89.3	81.5	62.5
31. Complies with guidelines for reviewing initial grievance requests by faculty.	84.7	89.2	87.5
32. Prepares the department budget and oversees its allocation.	88.0	92.6	100.0
33. Manages the resolution of student problems arising out of scheduling conflicts, late registration, drop and add card requests, etc.	70.0	62.9	87.5
34. Fosters coordination and mutual understanding between departments of the college.	91.4	85.2	100.0
35. Prepares and oversees the preparation of grant proposals to Federal, state, and local agencies from the department.	48.2	44.4	37.5

TABLE 10.--Percent of Total Responses from Upper Echelon Administrators, Department Chairpersons, and Faculty Showing Their Perceptions of Chairpersons' Actual and Desired Behavior for 14 Identified Administrative Tasks.

Actual Admin. Behavior (AP-GP)*	Questionnaire Item	Desired Admin. Behavior (HD-GD)†
89.6	#2 Complies with guidelines for class size in making class assignments.	90.6
84.9	#3 Consults with faculty in determining class assignments.	91.9
74.6	#5 Facilitates the orientation of new faculty members.	92.2
53.5	#6 Conducts department self-studies to determine faculty and departmental needs.	90.1
82.7	#8 Provides a means for open communication between faculty and department chairperson.	98.3
84.9	#9 Allows for faculty input in department decision-making concerning instructional planning.	98.7
78.9	#15 Communicates to faculty changes in administrative policy.	96.5
72.0	#16 Encourages faculty to attend professional meetings, seminars, and workshops to facilitate professional growth.	91.0
68.5	#17 Prepares and interprets reports to faculty and administration of departmental accomplishments.	90.5
83.6	#18 Participates effectively as a member of the divisional academic councils and college committees.	96.5
68.5	#22 Works cooperatively with faculty in developing departmental goals and objectives.	92.6
73.3	#25 Works cooperatively with faculty and deans in developing long and short range plans for curriculum.	93.1
86.2	#26 Works cooperatively with faculty in determining the scheduling of courses.	97.4
80.9	#32 Prepares the department budget and oversees its allocation	93.5

* (AP-GP) = Always Performs-Generally Performs.

† (HD-GD) = Highly Desired-Generally Desired.

perform. Table 10 will show the 14 identified administrative tasks and how department faculty, department chairpersons, and upper echelon administrators perceived the chairpersons' actual and desired behavior for each activity.

The purpose of this chapter was to present the analysis of data relative to this study. The following Chapters V and VI will present the performance objectives written from the 35 administrative tasks and the conclusions and recommendations from the study.

CHAPTER V

GENERATING BEHAVIORAL STATEMENTS FROM ADMINISTRATIVE FUNCTIONS

Introduction

The purpose of this chapter is to translate the administrative functions generated in Chapter III into performance objectives. By definition, a performance objective will be considered a communications device used to provide a precise description of a criterion situation derived from general, nonbehavioral statements (i.e., administrative functions) of desired outcomes in occupational performance. It is reasonable to expect that the quality of the communications about the objectives of the department will be improved when the elements of precision and observable behavior are made parts of the communication. It can also be expected that the quality of communication between and within the following groups will be improved: department faculty, department chairpersons, upper echelon administrators, advisory committees, and trustee members. Mager (1962:3) writes that "when clearly defined goals are lacking, it is impossible to evaluate a program efficiently and there is no sound basis for selecting appropriate



materials, content, or instructional methods." The same assumption can be held for rationale delineating the performance objectives for the department chairperson. Among the practical advantages to having administrative functions stated in performance terms for department chairmen are:

1. A higher quality of communications within and outside the department regarding objectives and levels of activity.

2. A better understanding between department faculty, department chairpersons and upper echelon administrators concerning the administrative capacity of the department chairperson.

3. Department faculty, department chairpersons, upper echelon administrators and others who might be engaged in organizational planning will have a better tool for identifying overlapping areas and gaps within the college's continuum of administrative job responsibilities.

4. Department chairpersons should be able to more efficiently utilize their time in carrying out job responsibilities rather than devoting time and energy to figuring out their functional responsibilities.

5. Precise performance objectives will present a more accurate picture of the department chairpersonship by acknowledging that the evaluation of

administrative performance will be assessed by precise rather than general procedures.

6. Performance objectives presented in precise terms provides department faculty, department chairperson, and upper echelon administrators with an improved tool with which to develop a more understandable description of what the department chairperson will do.

7. Clear statements of performance objectives will serve to dampen sometimes justifiable criticisms that administrators (e.g., department chairpersons) do not specify their goals in clear, precise terms because such goals have not been established.

8. Department chairpersons will feel more accountable to carefully stated performance objectives than to the often nebulous responsibilities given this position.

9. It will be possible to ensure that certain minimum levels of administrative competency will be achieved throughout the college.

10. It will facilitate the leadership training program of the college in developing criteria for selection of prospective department chairpersons.

In this study the generating and development of a set of administrative functions (i.e., general goal statements) was the first step toward the development of

performance objectives. That is, these were developed to define the scope or limitations of the position as well as serve as generalized goal statements given the expectations to the department chairperson's role. The administrative functions, therefore, could be more easily written since they lacked the precise terminology of performance objectives and did not specify either the conditions under which performance is to occur or the criteria by which it is to be measured.

It is important to note that the mere writing of administrative functions will not cause a change, for the better or worse, in the quality of administrative functioning on the part of the department chairperson. However, once these administrative functions have been expressed in more precise and understandable terminology, i.e., performance objectives, we have established a basic tool with which to examine many of the existing inconsistencies of the position of department chairperson.

Methodology

First, in the writing of administrative functions and the subsequent translation to performance objectives, it does not suggest that all other attempts to understand the chairmanship have been wrong. The duty statements compiled regarding department chairpersons are worthwhile and should be continued. Second, it should also be mentioned that there is no set formula for



developing administrative functions; the procedure in this study was that of cross-checking duty lists and identifying a general goal statement(s). The adequacy was assessed by determining: Does this administrative function adequately identify the broad areas of skills, understandings, and attitudes that the department chairperson must have in fulfilling his responsibilities? Third, in the writing of the performance objective, each administrative function will have at least one, and in most cases several, performance objectives in supporting the question of whether or not the administrative function has been achieved. That is, the administrative functions were developed and substantiated by the cross-checking of duty statements derived from previous research studies from which performance objectives were developed. Fourth, the model for writing each performance objective contained the following factors:

1. What the department chairperson will do (performance)
2. The setting (department, college, community) in which he will perform the task (situation)
3. How well he will perform the task (criteria)

Fifth, in addition to the above items of clarifying specificity and measurability of performance objectives, the following general criteria were considered:

4. Is the performance objective achievable?
5. Is it a worthwhile performance objective?
6. Does the sum of all the parts of the administrative function accurately describe the behavior which you desire?
7. Does the performance objective serve to satisfy all or part of one of the administrative functions?

Sixth, using the above guidelines in developing the performance objective, a description of the situation or condition(s) under which the expected behavior is to be observed in the department setting was established.

Definition of Terms for Describing Behavioral Competencies

The following terms were taken from Lynam's study of community junior college academic deans and are used throughout this study in describing performance objectives (1970:87-89):

- Analyze--A separation of the whole into component parts; an examination of a complex, its elements, and their relations; to study or determine the nature and relationships of the parts by analysis.
- Decide--To arrive at a solution that ends certainty or dispute, to bring a definite end.
- Define--To fix the limits; determine the essential qualities or precise meaning.
- Describe--To represent by work, figure, model, or picture.
- Determine--To settle or decide by choice of alternatives or possibilities.
- Detail--Extend treatment of particular items; a portion considered independently of the parts considered together.
- Develop--To set forth or make clear by degrees or in detail; the state of being developed.



- Development--The act process, or result of developing; the state of being developed.
- Evaluate--To determine or fix the value of; to examine or judge.
- Implement--To carry out; to provide implements for.
- Interpret--To explain the meaning of; to conceive in the light of individual belief; judgment or circumstance; bring to realization by performance.
- Predict--To declare in advance; foretell on the basis of observation, experience, or scientific reason.
- Provide--To take precautionary measures; to make a promise or stipulation; to supply what is needed for sustenance or support.
- Recognize--To perceive to be something previously known.
- Trace--A sign or evidence of some past thing.
- Utilize--To make use of; connect to use.

Description of the Performance Objectives
Generated from the Administrative
Functions

Administrative Function for Production Activities

- 1.00 Prepares and makes faculty assignments, complies with guidelines for class size in making class assignments, consults with faculty in determining class assignments.
- 1.10 Given a number of full- and part-time faculty members the department chairperson should be able to:
 - 1.11 Analyze the provisions of the college's master contract for faculty assignments and assign each full- and part-time faculty member to appropriate instructional areas for each quarter/semester.
 - 1.12 Determine the class size for each section consistent with the guidelines delineated in the master contract for each quarter/semester.
 - 1.13 Predict the number of new faculty that will be needed to meet departmental instructional needs one year in advance.



- 1.14 Determine the number possibilities for new instructional personnel according to the projected departmental budget one year in advance.
- 1.15 Analyze the scheduling of courses and class sections according to each faculty member's instructional assignment for each quarter/semester.
- 1.16 Evaluate each faculty member's contact hours or credit hours, number of students per class, preparation and laboratory responsibilities to determine class load each quarter or semester.
- 1.17 Describe areas of possible role conflict among faculty and department chairperson in making faculty teaching assignments each quarter or semester.
- 1.18 Recommend and evaluate ways of gaining faculty satisfaction in the process of instructional placement.
- 1.19 Develop ways of obtaining faculty input in determining course assignments each quarter/semester.
- 1.20 Describe several alternative methods to determine faculty load.

Administrative Function for Maintenance Activities

- 2.00 Works cooperatively with faculty in evaluating instructors for tenure; facilitates the orientation of new faculty members; conducts department self-studies to determine faculty and departmental needs; recommends the appointment, promotion or dismissal of faculty based on merit and performance alone; provides means for open communication between faculty and department chairperson; and allows for faculty input in department decision-making concerning instructional planning.
- 2.10 Given a number of full- and part-time faculty in a department, the department chairperson will be able to:



- 2.11 Define instructional and professional responsibilities of the department to new full- and part-time faculty each year/quarter/semester.
- 2.12 Define instructional and professional responsibilities of the college to new full- and part-time faculty each year/quarter/semester.
- 2.13 Describe the organization, functions, content areas and profile of the department to new full- and part-time faculty.
- 2.14 Provide orientation activities for new full- and part-time faculty members to the department at least twice a year.
- 2.15 Analyze and evaluate the instructional effectiveness of each faculty member.
- 2.16 List, describe, and make available the criteria for faculty evaluation to each department instructor.
- 2.17 Provide conference time for review of each faculty evaluation.
- 2.18 Develop, implement and evaluate a plan in which faculty members become involved in evaluating the department and department chairperson once a year.
- 2.19 Design a system of retrieval of information from faculty and students concerning department needs, instruction and curriculum.
- 2.20 Design and implement a plan for predicting and evaluating department cohesiveness for all departmental programs on a yearly basis.
- 2.21 Develop and evaluate provisions for faculty to critically evaluate and make recommendations in review of department policies and curriculum on a yearly basis.



Administrative Function for Boundary: Production Supportive Activities

- 3:00 Recruits, interviews, and hires full- and part-time faculty; maintains department inventories of supplies and equipment; manages the preparation and approval of all department purchase requisitions; involves faculty to participate in the hiring of new faculty members; and cooperates with researchers who are attempting to advance knowledge in the field.
- 3.10 Given a departmental setting, the department chairperson will be able to:
 - 3.11 Develop and evaluate criteria for hiring requirements of department instructional personnel each year.
 - 3.12 Develop yearly guidelines for faculty-student participation in department interview and hiring procedures of new faculty members.
 - 3.13 Encourage the department and department faculty to participate in research studies related to the field; and, department and college organizations.
- 3.20 Given a department budget, materials, and supplies the department chairperson will be able to:
 - 3.21 Develop guidelines for submission of a purchase request by faculty members consistent with department and college policy.
 - 3.22 Develop and evaluate guidelines for approving faculty requisition requests consistent with departmental approved priorities.
 - 3.23 Provide quarterly cost estimations for room utilization, equipment maintenance, laboratory supplies and equipment.
 - 3.24 List and evaluate yearly a departmental inventory of all materials and equipment funded by the department.

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- 3.25 List and evaluate a quarterly inventory of all expendable supplies used by the department.

Administrative Function for Boundary: Institutional Supportive Activities

- 4.00 Communicates to faculty changes on administrative policy; encourages faculty to attend professional meetings, seminars and workshops to facilitate professional growth; prepares and interprets reports to faculty and administration of departmental accomplishments; and participates effectively as a member of the divisional academic councils and college committees.
- 4.10 Given a department faculty at different levels of professional growth and development the department chairperson will be able to:
 - 4.11 Develop and evaluate a quarterly report to the faculty and administration of departmental accomplishments, programs and activities.
 - 4.12 Participate effectively as a member of the divisional academic councils and college committees in representing the department.
 - 4.13 Develop a plan to encourage each full-time faculty member to participate in professional growth activities outside the college.
 - 4.14 Develop and evaluate in-service workshops within the department to enhance each faculty member's instructional effectiveness and proficiency through professional growth experiences.
 - 4.15 Develop and describe a plan whereby the attendance and participation in professional growth activities will contribute to the promotional status of each full-time faculty member.
 - 4.16 Evaluate the master contract's definition of required activities in the areas of workshops and departmental meetings in and outside the college.



Administrative Function for Adaptive Activities

- 5.00 Initiates and reviews new developments in curriculum for the department, reviews trends on student characteristics within the department and college, develops long- and short-range instructional goals and objectives for the department consistent with the philosophy of the college, works cooperatively with faculty in developing departmental goals and objectives, provides for student input in developing departmental courses and programs with four-year institutions to facilitate transfer and curriculum development, and works cooperatively with faculty and deans in developing long- and short-range plans for curriculum.
- 5.10 Given a list of goals and objectives for the department, the department chairperson will be able to:
- 5.11 Determine those goals and objectives which are basically philosophical in origin to the department.
 - 5.12 Determine those goals and objectives which are basically historical in origin to the department.
 - 5.13 Determine those goals and objectives which are basically sociological in origin to the department.
 - 5.14 Determine those goals and objectives which are basically educational in origin to the department.
 - 5.15 Evaluate existing goals and objectives of the department stated in behavioral terms.
 - 5.16 Write and evaluate goals and objectives not stated in behavioral terms into behavioral terms.
- 5.20 Given a departmental curriculum arranged in several content areas, the department chairperson will be able to:
- 5.21 Develop and evaluate all curriculum areas of the department as to their relevance to department goals and objectives.

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- 5.22 Develop curriculum priorities in terms of changing patterns in four-year institutions to facilitate the transfer function.
 - 5.23 Develop curriculum priorities in terms of the changing needs of students.
 - 5.24 Develop and evaluate curriculum priorities in terms of changing occupational trends.
 - 5.25 Develop a plan for short-range instructional objectives in the areas of curriculum development consistent with the goals and objectives of the department and college.
 - 5.26 Develop a plan to involve faculty, advisory committees and students in initiating and evaluating new curriculum and course proposals of the department.
 - 5.27 Develop a plan for initiating long-range objectives in the area of curriculum development consistent with the goals and objectives of the department and college.
 - 5.28 Determine the conflict in department goals and objectives and the institutional goals in the areas of instruction, curriculum, department programs and activities.
- 5.30 Given a student population enrolled in department courses and programs, the department chairperson will be able to:
- 5.31 Evaluate student achievement outcomes in regard to course goals and objectives.
 - 5.32 Develop and evaluate different alternatives to the grading and evaluation policies of the department assessing student achievement.
 - 5.33 Develop a plan to determine the sources of student attrition in departmental courses and programs.



Administrative Function for Managerial Activities

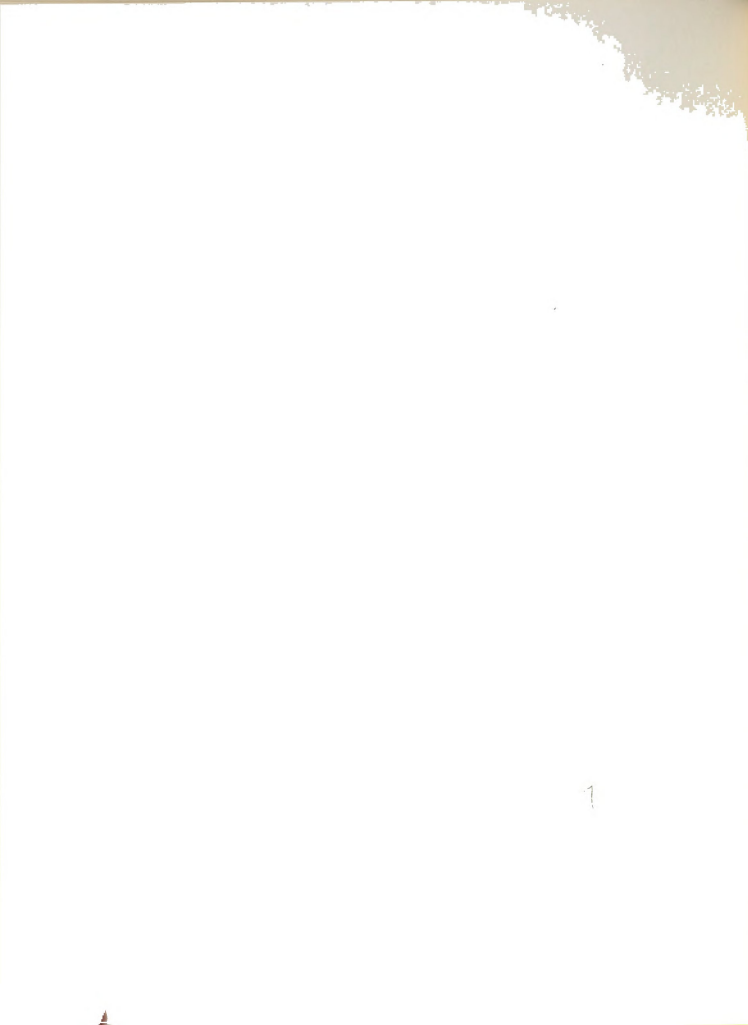
- 6.00 Works cooperatively with faculty in determining scheduling of courses; gives more consideration to cost factors than educational needs in preparing the department budget; involves department faculty in determining allocation of the department budget; prepares the department budget and oversees its allocation; consults with faculty about filling vacancies in the department; complies with guidelines for reviewing initial grievance requests by faculty; works effectively to resolve student-instructor conflicts within the department; manages the resolution of student problems arising out of scheduling conflicts, late registration, drop-and-add card requests, etc.; fosters coordination and mutual understanding between departments of the college; and prepares and oversees the preparation of grant proposals to federal, state and local agencies from the department.
- 6.10 Given a department budget, the department chairperson will be able to:
- 6.11 Determine the department budget in terms of priority items consistent with department goals and objectives.
 - 6.12 List and categorize each budgeting item under the appropriate heading and account number.
 - 6.13 Evaluate and approve faculty and departmental budget requests based on the departmental goals and objectives biannually.
- 6.20 Given a master contract delineating faculty rights, the department chairperson will be able to:
- 6.21 Evaluate the provisions in the master contract that delineate due process procedures for department faculty members.
 - 6.22 Develop and describe due process procedures for the department consistent with the college policy and the master contract.

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- 6.30 Given the projected enrollment for each semester or quarter, the department chairperson will be able to:
- 6.31 Develop a schedule for all departmental courses.
 - 6.32 Predict the number of students, from early enrollment data, that will be enrolled in each section,
 - 6.33 Develop or utilize an existing formula for determining class enrollment.
 - 6.34 Develop a plan to coordinate department scheduling across other disciplines within the college.
 - 6.35 Develop a plan to coordinate department programs and projects across other disciplines within the college.
 - 6.36 Develop a plan for obtaining financial assistance from industry and business in the community as well as from state and federal agencies to sponsor department studies and programs.



CHAPTER VI

SUMMARY, SIGNIFICANT FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary

In order for the community junior college to function as a total system, the subsystems or departments that comprise each institution must be described in terms of their own goals and objectives as well as the goals and objectives of the institution, and the role expectations of upper echelon administrators, department chairpersons, and department faculty members must be defined. If the community junior college is to be an open system, with communication occurring internally and externally, the department must be viewed as an important component of this system. The administrative head of each department (i.e., department chairperson) must perform the administrative activities in a manner that allows for open communication in coordinating departmental and institutional activities. However, the department chairperson's role often lacks a clear definition of the expectations the chairperson must fulfill in successfully managing the department.

Several dissertations (Lynam, 1970; Davies, 1970; Pierce, 1970) have been completed on the role expectations



and performance objectives of community junior college upper echelon administrators and department faculty, but little attention has been given to the question of determining the role expectations of department chairpersons and expressing the expectations as performance objectives.

Therefore, the purpose of this study was as follows:

A. To generate a set of administrative functions from duty statements and role expectations found in the research and literature that describe what administrative activities the department chairperson should perform in the community junior college.

B. To examine the perceived validity of the generated administrative functions, using a survey questionnaire, by sampling upper echelon administrators, department chairpersons, and department faculty in selected Michigan community junior colleges.

C. To express the generated administrative functions as performance objectives that describe what the department chairperson should be able to do, the conditions under which activities are to be done and the level of performance to be attained in completing the activities (Chapter V).

Generated Administrative Role Functions

The following administrative activities represent the Department Chairperson's Administrative Functions



that were generated from the review of literature for this study.

Administrative Function for Production Activities

1. Prepares and makes faculty assignments.
2. Complies with guidelines for class size in making class assignments.
3. Consults with faculty in determining class assignments.

Administrative Function for Maintenance Activities

4. Works cooperatively with faculty in evaluating instructors for tenure.
5. Facilitates the orientation of new faculty members.
6. Conducts department self-studies to determine faculty and departmental needs.
7. Recommends the appointment, promotion or dismissal of faculty based on merit and performance alone.
8. Provides a means for open communication between faculty and department chairman.
9. Allows for faculty input in department decision-making concerning instructional planning.

Administrative Function for Boundary: Production Supportive Activities

10. Recruits, interviews and hires full and part time faculty.
11. Maintains department inventories of supplies and equipment.
12. Manages the preparation and approval of all department purchase requisitions.
13. Involves faculty in the hiring of new faculty members.
14. Cooperatives with researchers who are attempting to advance knowledge in the field.

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Administrative Function for Boundary: Institutional Supportive Activities

15. Communicates to faculty changes in administrative policy.
16. Encourages faculty to attend professional meetings, seminars and workshops to facilitate professional growth.
17. Prepares and interprets reports to faculty and administration of departmental accomplishments.
18. Participates effectively as a member of the divisional academic councils and college committees.

Administrative Function for Adaptive Activities

19. Initiates and reviews new developments in curriculum for the departments.
20. Reviews trends on student characteristics within the department and college.
21. Develops long and short range instructional goals and objectives for the department consistent with the philosophy of the college.
22. Works cooperatively with faculty in developing departmental goals and objectives.
23. Provides for student input in developing departmental goals and objectives.
24. Articulates departmental courses and programs with four-year institutions to facilitate transfer and curriculum development.
25. Works cooperatively with faculty and deans in developing long and short range plans for curriculum.

Administrative Function for Managerial Activities

26. Works cooperatively with faculty in determining scheduling of courses.
27. Gives more consideration to cost factors than educational needs in preparing the department budget.
28. Involves department faculty in determining allocating of the department budget.

29. Works effectively to resolve student-instructor conflicts within the department.
30. Consults with faculty about filling vacancies in the department.
31. Complies with guidelines for reviewing initial grievance requests by faculty.
32. Prepares the department budget and oversees its allocation.
33. Manages the resolution of student problems arising out of scheduling conflicts, late registration, drop and add card requests, etc.
34. Fosters coordination and mutual understanding between departments of the college.
35. Prepares and oversees the preparation of grant proposals to Federal, state, and local agencies from the department.

Using a survey questionnaire approach, it was assumed that a structured questionnaire would assure uniformity from one individual to another for comparative purposes. The purpose of the questionnaire was to ask upper echelon administrators, department chairpersons, and department faculty to respond to the 35 administrative activities (grouped under the six administrative functions) and indicate the extent to which they perceived department chairpersons were or were not doing these tasks; i.e., the actual administrative behavior. They were also asked to indicate the extent to which they felt department chairpersons should or should not be doing these tasks; i.e., the desired administrative behavior. The questionnaire was piloted by a group of



community junior college instructors and administrators after which adjustments were made prior to the mailing of the instrument to the participating community junior colleges.

A 3 x 2 design matrix with three levels of position (UEA, DC, and DF) and two levels of responses (T_1 and T_2) was used as the basic matrix. A total of 232 subjects participated in the study. The subjects were distributed unequally within the six cell matrix.

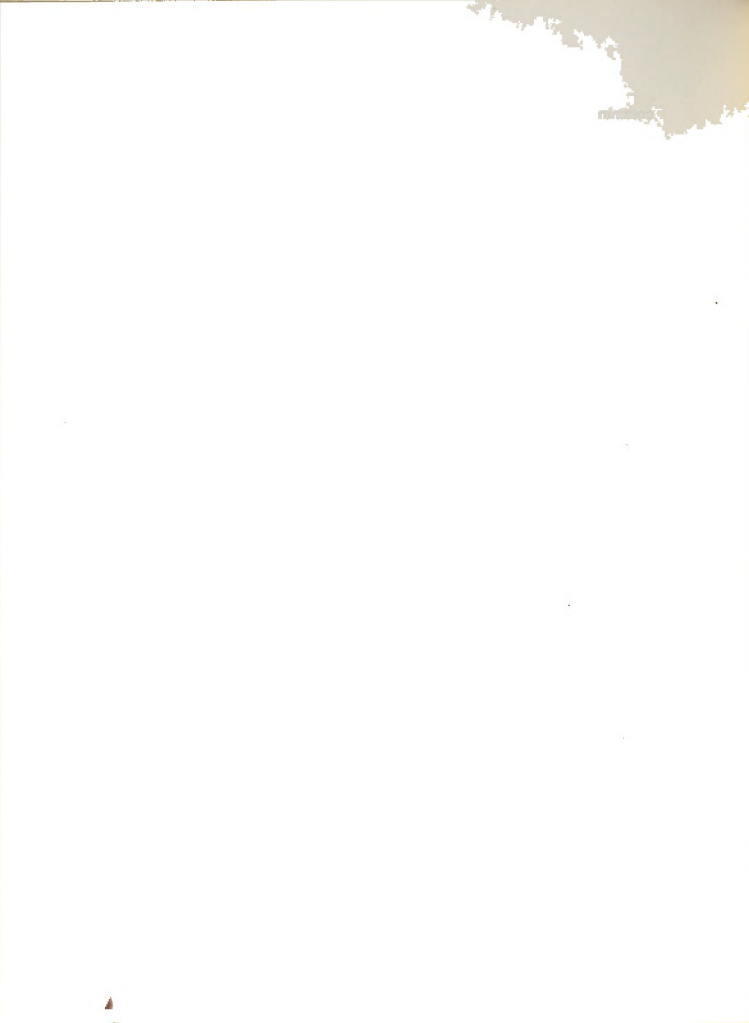
Significant Findings

The purpose of this section will be to present the significant findings of this study.

Statistically Significant Findings 1 and 2 and Discussion

1. There was no significant interaction between Tests (T_1 and T_2) and Positions (UEA, DC, and DF), $p < .8206$.
2. There was no significant difference among UEA's, DC's and DF across Tests (T_1 and T_2), $p < .0987$.

Although the subjects were grouped into three distinct positions (UEA, DC, and DF) there was no interaction between groups in the tests for actual and desired behavior for department chairpersons. Also, as UEA's, DC's and DF responded to the 35 items describing the department chairperson's administrative role expectations, there was no significant difference in perceptions about



the department chairperson's role across the Tests for actual and desired behavior (T_1 and T_2). Therefore, Hypotheses I and II were not rejected.

Statistically Significant
Finding 3 and Discussion

3. There was a significant difference between Tests (T_1 and T_2) with $p < .0001$.

It was concluded there was a significant difference in T_1 and T_2 at the .05 level across the three positions (UEA, DC, and DF). Since T_1 and T_2 were a measure of the actual and desired administrative behavior of the department chairperson, respectively, it was reasonable to assume that T_1 and T_2 would differ.

Statistically Significant
Findings 4 and 5 and
Discussion

4. On the Test for Actual Behavior (T_1), UEA's, DC's and DF tended to agree that department chairpersons generally perform the six administrative functions; ungrouped data 95% confidence interval = 2.0830 to 2.2148.
5. On the Test for Desired Behavior (T_2) UEA's, DC's and DF tended to agree that the six administrative functions were highly desired activities for department chairpersons; 95% confidence interval = 1.6215 to 1.7163.

It was concluded from the findings of Test (T_2) that UEA's, DC's and DF tended to agree that the 35 items that made up the six administrative functions were important tasks for the department chairperson.

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Statistically Significant
Finding 6 and Discussion

6. Upper echelon administrators, department chairpersons, and department faculty tended to agree that the six administrative functions are significant tasks for the department chairperson (UEA, $p < .019$; DC, $p < .011$; DF, $p < .001$).

Using Pearson correlation coefficients, it was concluded that the six administrative functions were significant tasks for department chairpersons:

1. Administrative Function for Production Activities
2. Administrative Function for Maintenance Activities
3. Administrative Function for Boundary: Production Supportive Activities
4. Administrative Function for Boundary: Institutional Supportive Activities
5. Administrative Function for Adaptive Activities
6. Administrative Function for Managerial Activities

The purpose of this study was to generate a set of administrative functions that would help clarify the department chairperson's role in community junior colleges. The approach was to generate administrative functions from the literature and then survey the desirability of the administrative tasks among department faculty, department chairpersons and upper echelon administrators using a questionnaire. The outcomes of the analysis of data indicated that the



administrative functions generated in this study were considered by the study's participants to be highly desired activities for the department chairperson.

A second conclusion was that department faculty and upper echelon administrators perceived the department chairperson as generally performing the administrative tasks outlined in this study.

The findings of this study also indicated that the procedure used in generating and determining the department chairperson's administrative functions can serve as a useful process for future investigations in determining role expectations in social organizations.

The following administrative functions were identified as being most significant for department faculty, department chairpersons and upper echelon administrators:

Administrative Function for Production Activities--Prepares and makes faculty assignments, complies with guidelines for class size in making class assignments, consults with faculty in determining class assignments.

Administrative Function for Maintenance Activities--Works cooperatively with faculty in evaluating instructors for tenure. Facilitates the orientation of new faculty members; conducts department self-studies to determine faculty and departmental needs; recommends the

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion (United Nations 1994).

There is a growing awareness of the need to address the needs of children in the world, and the United Nations has developed a series of goals for the 21st century (United Nations 1994). The first goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The second goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The third goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The fourth goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The fifth goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The sixth goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The seventh goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The eighth goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The ninth goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The tenth goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The eleventh goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

The twelfth goal is to 'achieve universal primary education' by the year 2000. This goal is based on the recognition that education is a key to development, and that all children should have access to a basic education. The goal is to be achieved by ensuring that all children, regardless of their background, have access to a primary education.

appointment, promotion, or dismissal of faculty based on merit and performance alone; provides means for open communication between faculty and department decision-making concerning instructional planning.

Administrative Function for Boundary: Institutional Supportive Activities--Communicates to faculty changes in administrative policy; encourages faculty to attend professional meetings, seminars and workshops to facilitate professional growth; prepares and interprets reports to faculty and administration of departmental accomplishments; and participates effectively as a member of the divisional academic councils and college committees.

The faculty's perceptions of the department chairperson's Administrative Function for Productive Activities indicated a desire to be involved in the decision-making process concerning class assignments and the scheduling of classes. The inclusion of faculty in planning class assignments and scheduling as well as having input to the courses they would like to teach can be a cooperative approach to enhance teacher satisfaction. Another consideration would be that as faculty becomes more involved in planning, the level of satisfaction attained should increase faculty output in the teaching function.

In reviewing the Administrative Function for Maintenance Activities, the findings indicated a need for



faculty input in the areas of instructional planning and evaluation of faculty for tenure with the chairperson. Faculty in this study also indicated a need for departmental self-studies to be conducted to identify departmental needs.

For the Administrative Function for Boundary: Institutional Supportive Activities, the participants indicated a need for effective communication between department chairpersons and faculty on changes in administrative policy. One aspect of this study was to discuss the importance of open communication within the department and institution in successfully managing the department. It should be pointed out that as communication occurs between faculty and chairperson, the department as a system becomes more functional in carrying out its goals and objectives. Another finding identified with this administrative function was that faculty felt more input should be made by chairpersons in encouraging faculty to attend professional conferences, seminars, and workshops. A final consideration was for the chairperson to work with academic councils to facilitate course development, planning and coordination between departments.

An item analysis of the 35 administrative tasks further indicated the importance of faculty input in decision-making and open communication within the department and college. The following items were identified to



Highly Desired to Generally Desired tasks for the department chairpersons as perceived by department faculty, department chairpersons, and upper echelon administrators:

- Complies with guidelines for class size in making class assignments.
- Consults with faculty in determining class assignments.
- Facilitates the orientation of new faculty members.
- Conducts department self-studies to determine faculty and departmental needs.
- Provides a means for open communication between faculty and department chairperson.
- Allows for faculty input in department decision-making concerning instructional planning.
- Communicates to faculty changes in administrative policy.
- Encourages faculty to attend professional meetings, seminars, and workshops to facilitate professional growth.
- Prepares and interprets reports to faculty and administration of departmental accomplishments.
- Participates effectively as a member of the divisional academic councils and college committees.
- Works cooperatively with faculty in developing departmental goals and objectives.
- Works cooperatively with faculty and deans in developing long and short range plans for curriculum.
- Works cooperatively with faculty in determining the scheduling of courses.
- Prepares the department budget and oversees its allocation.

Some Personal Observations

Albert Smith's (1970) study describing the department chairperson's role involved persons with the title of division/department head, director, representative and department chairman. In Smith's study there was no agreement among department chairpersons, department faculty, and upper echelon administrators on the department chairperson's role. The participants in this study were from community junior colleges where collective bargaining played an important role in defining responsibilities. The agreement among department faculty department chairperson, and upper echelon administrators on the chairperson's role in this study could be attributed to the fact that faculty-administrative role expectations have been described generally in the master contract.

From participant comments about the questionnaire, there was a tendency to regard the study as an evaluation of the department chairperson. The responses indicated that the procedure used in this study of role expectations can serve as a means to measure faculty attitudes about the chairperson and department management. The findings in this study also indicated that the participating department faculty perceived their department chairpersons as performing the administrative functions and that the tasks outlined in this study were highly desirable activities.

From (1) and (2) we have

$$\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right)$$

which is true.

Q.E.D.

□

Another consideration was in the area of leadership. A measure of the department chairperson's effectiveness can be determined by assessing the upper echelon administrators', department faculty and department chairpersons' perceptions of the chairperson's administrative behavior in performing departmental tasks. In view of the responses from the participants in this study, perceptions of the chairperson's actual administrative behavior was indicated as being desirable behavior.

In agreement with Smith's (1970) study of department chairpersons, upper echelon administrators tended to regard the department chairperson's administrative behavior more favorably than did department faculty. For example, the mean scores for the department chairperson's actual administrative performance were higher for those departments that evaluated their department chairpersons than those who did not evaluate their chairpersons. This suggests that in order for evaluation to occur, there must be some agreement on activities to be evaluated by the chairperson, faculty and dean. Another point was that department chairpersons in permanent positions had higher mean scores for actual administrative performance than department chairpersons who served on a rotational basis. However, in terms of the listed desired administrative tasks for the chairperson in this study, the level of perception of upper echelon administrators, department

Another important aspect of the study is the

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chairpersons and department faculty for the chairperson's desired administrative tasks indicated the tasks as being highly desirable.

The instrument used in this study was developed to determine the administrative functions of the chairperson as perceived by department faculty, department chairpersons, and upper echelon administrators. In the administrative functions described in this study, department faculty were included in the decision-making process of the department. The findings suggest that department faculty should be involved in the decision-making of the department to facilitate attainment of departmental goals. Moreover, as department faculty perceived themselves as being actively involved in the department's decision-making process, there was a greater tendency toward agreement, on the part of department faculty, with department chairpersons and upper echelon administrators on the department chairperson's administrative functions.

In conclusion, the findings presented in this study of the department chairperson's administrative role are as follows:

1. Department faculty, department chairpersons and upper echelon administrators perceived chairpersons as performing the six administrative functions generated in this study.

1890-1891

1891-1892

1892-1893

2. Department faculty, department chairpersons and upper echelon administrators perceived the administrative functions as being highly desirable tasks for the chairperson to perform.

3. Department faculty perceived themselves as working cooperatively with chairpersons in accomplishing departmental goals; particularly in the areas of faculty evaluation, instructional planning, and course scheduling.

4. Department chairpersons should maintain a climate of open communication within the department as a means of managing conflict arising out of administrative policy changes and day-to-day operations.

5. Department chairpersons should conduct departmental self-studies to assess needs or problems as they develop during the operational year.

The findings of this study indicate that department faculty, department chairpersons, and upper echelon administrators perceive department chairpersons as having a set of administrative activities to perform in the community junior college. The implications of these findings on future studies concerning department chairpersons suggests that researchers examine the following:

1. Using a set of administrative activities, determine if department faculty, department chairpersons and upper echelon administrators perceive any difference in the administrative performance of department

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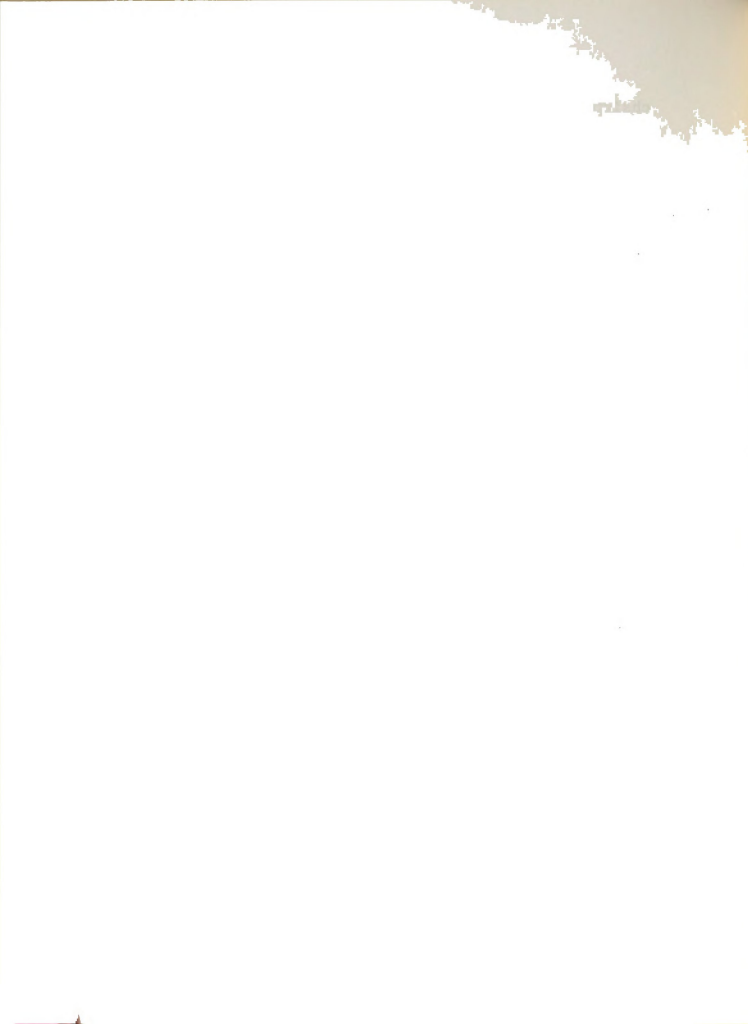
chairpersons who serve in permanent positions as opposed to those department chairpersons who serve on a rotational basis.

2. Using a set of administrative activities, determine if department faculty, department chairpersons and upper echelon administrators perceive any difference in administrative performance of department chairpersons who are evaluated by their faculty as opposed to those department chairpersons who are not evaluated by their faculty.

3. Determine the management and leadership styles of effective department chairpersons as perceived by department faculty, department chairpersons, and upper echelon administrators to develop criteria that will assist community junior college administrators in the selection and training process of prospective department chairpersons.

Recommendations

The following recommendations, based on the results and conclusions of this study, are offered to community junior college upper echelon administrators, board members, department chairpersons, and faculty. It is the intent of the investigator that these recommendations will be useful in clarifying the department chairperson's role in the community junior college.



It is recommended:

1. That each community junior college continue to carry out periodic institutional studies with upper echelon administrators, department chairpersons, and department faculty to determine the department chairperson's administrative role.

2. That the department chairperson's administrative role be expressed in terms of performance objectives to serve as guidelines for the evaluation of department chairpersons.

3. That community junior colleges develop administrative functions and performance objectives to serve as criteria in aiding the recruitment of prospective department chairpersons.

4. That community junior colleges develop administrative functions and performance objectives to serve as criteria in evaluating department chairpersons for promotion and salary determination.

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1964

APPENDICES



APPENDIX A

QUESTIONNAIRE



DATE 1/14/76
CODE NUMBER

INTRODUCTION

This is a survey to study the administrative role expectations of community-junior college department chairpersons in Michigan. The purpose of this study is first, to determine the administrative role expectations incumbent to the position of department chairperson and second, to translate the administrative role expectations into behavioral objectives related to job performance.

Your responses will be kept strictly confidential and the questionnaire data will be available only to the investigator. In no way will any participant, department or college be specifically identified in this study. The questionnaire, which has been pilot tested, is normally completed in 15 minutes.

GENERAL DIRECTIONS

1. Please answer all questions.
2. Write in explanations if you feel this will help clarify your meaning.
3. In order to insure unbiased results, please complete the questionnaire before discussing its contents with anyone.
4. Please return your questionnaire by mail in the enclosed, post-paid envelope to:

Clyde D. Carnegie
1616 West Michigan Avenue
Lansing, Michigan

Your interest and cooperation in this study will be greatly appreciated.

PART I
UPPER ECHELON ADMINISTRATOR

The purpose of this section is to determine the administrative role expectations of department chairpersons in Liberal Arts Colleges/ Divisions. You will be asked to respond to two categories of answers: (1) actual administrative behavior--what you believe your department chairpersons are doing or are not doing, and (2) desired administrative behavior--what you perceive should be expected of your department chairpersons in terms of performance.

DIRECTIONS:

To the left side of each item circle the number corresponding to your perception of your department chairpersons' actual administrative behavior; i.e., the extent to which you feel your department chairpersons are or are not actually performing this activity. To the right side of each item circle the number corresponding to what you believe your department chairpersons should be doing: i.e., the extent to which you feel your department chairpersons should be doing this activity.



PART I
DEPARTMENT CHAIRPERSON

The purpose of this section is to determine the administrative role expectations of the department chairperson in community-junior colleges. You will be asked to respond on two categories of answers:

- (1) actual administrative behavior--the extent to which you feel you actually perform this activity as department chairperson, and
- (2) desired administrative behavior--what you perceive you should be doing as department chairperson in terms of performance.

DIRECTIONS:

To the left side of each item circle the number corresponding to your perception of your actual administrative behavior: i.e., the extent to which you feel you actually perform this activity. To the right side of each item circle the number corresponding to what you believe you should be doing: i.e., the extent to which you feel you should be doing this activity.

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PART I
DEPARTMENT FACULTY

The purpose of this section is to determine the administrative role expectations of the department chairperson in community-junior colleges. You will be asked to respond on two categories of answers: (1) actual administrative behavior--what you believe your department chairperson is doing or is not doing, and (2) desired administrative behavior--what you perceive should be expected of your department chairperson in terms of performance.

DIRECTIONS:

To the left side of each item circle the number corresponding to your perception of your department chairperson's actual administrative behavior: i.e., the extent to which you feel your department chairperson is or is not actually performing this activity. To the right side of each item circle the number corresponding to what you believe your department chairperson should be doing: i.e., the extent to which you feel your department chairperson should be doing this activity.



ACTUAL BEHAVIOR

QUESTIONNAIRE ITEMS

DESIRED BEHAVIOR

Always Performs Generally Performs May or May Not Perform Usually Does Not Perform Never Performs					QUESTIONNAIRE ITEMS					Highly Desired Generally Desired May or May Not Be Desired Usually Not Desired Not Desired				
1	2	3	4	5	1.	Prepares and makes faculty assignments.	1	2	3	4	5			
1	2	3	4	5	2.	Complies with guidelines for class size in making class assignments.	1	2	3	4	5			
1	2	3	4	5	3.	Consults with faculty in determining class assignments.	1	2	3	4	5			
1	2	3	4	5	4.	Works cooperatively with faculty in evaluating instructors for tenure.	1	2	3	4	5			
1	2	3	4	5	5.	Facilitates the orientation of new faculty members.	1	2	3	4	5			
1	2	3	4	5	6.	Conducts department self-studies to determine faculty and departmental needs.	1	2	3	4	5			
1	2	3	4	5	7.	Recommends the appointment, promotion or dismissal of faculty based on merit and performance alone.	1	2	3	4	5			
1	2	3	4	5	8.	Provides a means for open communication between faculty and department chairman.	1	2	3	4	5			
1	2	3	4	5	9.	Allows for faculty input in department decision-making concerning instructional planning.	1	2	3	4	5			
1	2	3	4	5	10.	Recruits, interviews and hires full and part time faculty.	1	2	3	4	5			
1	2	3	4	5	11.	Maintains department inventories of supplies and equipment.	1	2	3	4	5			
1	2	3	4	5	12.	Manages the preparation and approval of all department purchase requisitions.	1	2	3	4	5			
1	2	3	4	5	13.	Involves faculty in the hiring of new faculty members.	1	2	3	4	5			
1	2	3	4	5	14.	Cooperates with researchers who are attempting to advance knowledge in the field.	1	2	3	4	5			
1	2	3	4	5	15.	Communicates to faculty changes on administrative policy.	1	2	3	4	5			
1	2	3	4	5	16.	Encourages faculty to attend professional meetings, seminars and workshops to facilitate professional growth.	1	2	3	4	5			
1	2	3	4	5	17.	Prepares and interprets reports to faculty and administration of departmental accomplishments.	1	2	3	4	5			
1	2	3	4	5	18.	Participates effectively as a member of the divisional academic councils and college committees.	1	2	3	4	5			
1	2	3	4	5	19.	Initiates and reviews new developments in curriculum for the departments.	1	2	3	4	5			
1	2	3	4	5	20.	Reviews trends on student characteristics within the department and college.	1	2	3	4	5			
1	2	3	4	5	21.	Develops long and short range instructional goals and objectives for the department consistent with the philosophy of the college.	1	2	3	4	5			
1	2	3	4	5	22.	Works cooperatively with faculty in developing departmental goals and objectives.	1	2	3	4	5			
1	2	3	4	5	23.	Provides for student input in developing departmental goals and objectives.	1	2	3	4	5			
1	2	3	4	5	24.	Articulates departmental courses and programs with four-year institutions to facilitate transfer and curriculum development.	1	2	3	4	5			
1	2	3	4	5	25.	Works cooperatively with faculty and deans in developing long and short range plans for curriculum.	1	2	3	4	5			
1	2	3	4	5	26.	Works cooperatively with faculty in determining scheduling of courses.	1	2	3	4	5			
1	2	3	4	5	27.	Gives more consideration to cost factors than educational needs in preparing the department budget.	1	2	3	4	5			
1	2	3	4	5	28.	Involves department faculty in determining allocating of the department budget.	1	2	3	4	5			
1	2	3	4	5	29.	Works effectively to resolve student-instructor conflicts within the department.	1	2	3	4	5			
1	2	3	4	5	30.	Consults with faculty about filling vacancies in the department.	1	2	3	4	5			
1	2	3	4	5	31.	Consults with guidelines for reviewing initial grievance requests by faculty.	1	2	3	4	5			
1	2	3	4	5	32.	Prepares the department budget and oversees its allocation.	1	2	3	4	5			
1	2	3	4	5	33.	Manages the resolution of student problems arising out of scheduling conflicts, late registration, drop and add card requests, etc.	1	2	3	4	5			
1	2	3	4	5	34.	Fosters coordination and mutual understanding between departments of the college.	1	2	3	4	5			
1	2	3	4	5	35.	Prepares and oversees the preparation of grant proposals to Federal, state, and local agencies from the department.	1	2	3	4	5			

PLEASE TURN PAGE TO COMPLETE PART II

PART II: (UPPER ECHELON ADMINISTRATOR)

1. Please indicate your present, full title: _____

2. Number of years in present position: _____ years.
3. Please indicate how the department chairperson in your Liberal Arts College/Division is selected (select only one):
 - a. Appointed by central administration only ☐
 - b. Appointed by central administration and approved by department faculty ☐
 - c. Selection based upon equal participation of the department faculty and central administration ☐
 - d. The department makes selection with the approval of central administration ☐
 - e. The department faculty makes selection independent of central administration ☐
4. Please indicate how long department chairpersons serve in your Liberal Arts College/Division (select only one):
 - a. Rotational among department members for a number of years: _____ years
 - b. Permanent position ☐

Comments: _____

UNIT II: THE AMERICAN WEST

1. Please indicate your present full-time

employment status.

2. Please indicate your present full-time

employment status.

3. Please indicate your present full-time

employment status.

4. Please indicate your present full-time

employment status.

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employment status.

12. Please indicate your present full-time

employment status.

13. Please indicate your present full-time

employment status.

14. Please indicate your present full-time

employment status.

PART II: (DEPARTMENT CHAIRPERSON)

1. Please indicate the name of your department _____.
2. Number of years as department chairperson in present department _____ years.
3. Number of full time faculty members (excluding yourself) in your department _____.
4. Number of years administrative experience in other community-junior colleges: _____.
5. Please indicate if your college is unionized or non-unionized:
☐ Unionized/Organized ☐ Non-unionized
6. If unionized, please indicate your position:
Part of the faculty bargaining unit ☐
Part of the administrative bargaining unit ☐
7. Please indicate how the chairmanship is served in your department (select only one)
 - a. Rotational among department members for a number of years: _____ years
 - b. Permanent position ☐
8. Do faculty in your department participate, at any time, in the formal evaluation of you as department chairperson?
Yes ☐
No ☐

Comments: _____



PART II: (FACULTY)

1. Please indicate the name of your department_____.
2. Circle degree last earned: BA BS MA MS Ed.Sp. Ed.D. Ph.D.
Other_____
3. Number of years teaching experience in community-junior college:
_____ Years part time _____ Years full time
4. Please indicate whether your college is unionized or non-unionized.
☐ Unionized/Organized ☐ Non-unionized

Comments: _____

APPENDIX B

EXAMPLES OF CORRESPONDENCE



APPENDIX B

EXAMPLES OF CORRESPONDENCE

Letter of Inquiry and Endorsement To College Presidents

(Date)

Dear President:

This is a letter of inquiry to solicit your college's participation in a doctoral research study involving department faculty, department chairpersons, and upper echelon administrators. The purpose of my study is as follows:

To generate administrative functions from position descriptions and role expectations found in the research and literature describing administrative activities department chairpersons should perform.

To examine the validity of these administrative functions using a survey questionnaire by sampling department faculty, department chairpersons and upper echelon administrators in selected Michigan community junior colleges.

To express the administrative functions in specific performance objectives describing what the department chairman should be able to do, the conditions under which he should be able to do it, and the level of performance he should be able to attain in completing these activities.

The questionnaire data will be kept strictly confidential and in no way will any participant, department, or college be specifically identified in this study. Each participant will be provided with a post-paid envelope for returning the questionnaire. The questionnaire, which has been pilot tested, is normally completed in 15 minutes and requires the respondent only to circle the response selected for each item.



I am planning to contact each president by phone within a week. The purpose of this personal contact is to provide additional information concerning the study, and to determine whether or not your institution will be able to participate.

Your consideration and support of this study will be greatly appreciated.

Sincerely,

Clyde D. Carnegie
Doctoral Candidate
Administration and Higher Education
Michigan State University

I am extremely sorry to hear that you are
 ill. The purpose of this letter is to
 let you know that I am thinking of you
 and hope you are getting better.

Yours truly,
 [Signature]

(Date)

Dear President:

As of our telephone conversation December 22nd concerning my inquiry as to whether or not your college would be able to participate in my study of department chairmen, I would like to express my appreciation for your college's acceptance to participate in this study.

Enclosed are the packets containing the questionnaires with post-paid envelopes for the participating department faculty, department chairmen, and dean in your liberal arts college or division.

I am planning to contact all participating community junior colleges by phone within two weeks to see if additional questionnaires are needed.

Again, I would like to express my sincere appreciation for your assistance in this study.

Respectfully,

Clyde Carnegie
Doctoral Candidate
Michigan State University
Administration and Higher Education

Enclosures

President Follow-Up Letter

(Date)

Dear President:

The purpose of this letter is to ask for your continued assistance in encouraging your department chairpersons and faculty to complete and return the questionnaire regarding the administrative functions of community junior college department chairpersons. To date I have received 21 completed questionnaires from your department faculty and 2 department chairpersons' questionnaires from the following departments:

English
Math-Science

In order to achieve the needed responses from your department chairpersons and faculty for the research report, please remind your department chairpersons and faculty to submit their completed questionnaires at their earliest convenience.

I am planning to contact all participating community junior colleges by phone next week to inquire if any additional questionnaires are needed by department chairpersons and faculty. Enclosed with this letter are additional questionnaires, post-paid envelopes and a letter asking for their cooperation in this study.

At this juncture in the study, I would like to express my thanks for the support and assistance you have extended me during this study.

Upon completion of the study, I shall notify you of the significant findings and will forward an abstract to your college library. Again, thank you for your cooperation.

Sincerely,

Clyde Carnegie

Enclosures

Standard Table-20 (continued)

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Department Chairperson and Faculty
Follow-Up Letter

March 15, 1976

Dear Participant:

This is a brief note to ask your assistance in completing and returning the survey questionnaire concerning the administrative functions of department chairpersons in community junior colleges. In order to validate department responses, it is necessary that a maximum number of responses be received from each participating department. The importance of this information to your institution depends heavily on the participation of your department chairpersons and department faculty to ensure a good representation of your college's responses.

A post-paid envelope with the proper address was provided with the questionnaire. If you have misplaced the envelope or questionnaire, please request another one from your department secretary.

I would like to express my appreciation for your interest in this study and I am sure that your department's responses will provide significant input into describing the administrative role of the community junior college department chairperson.

Sincerely,

Clyde D. Carnegie
Doctoral Candidate
Michigan State University

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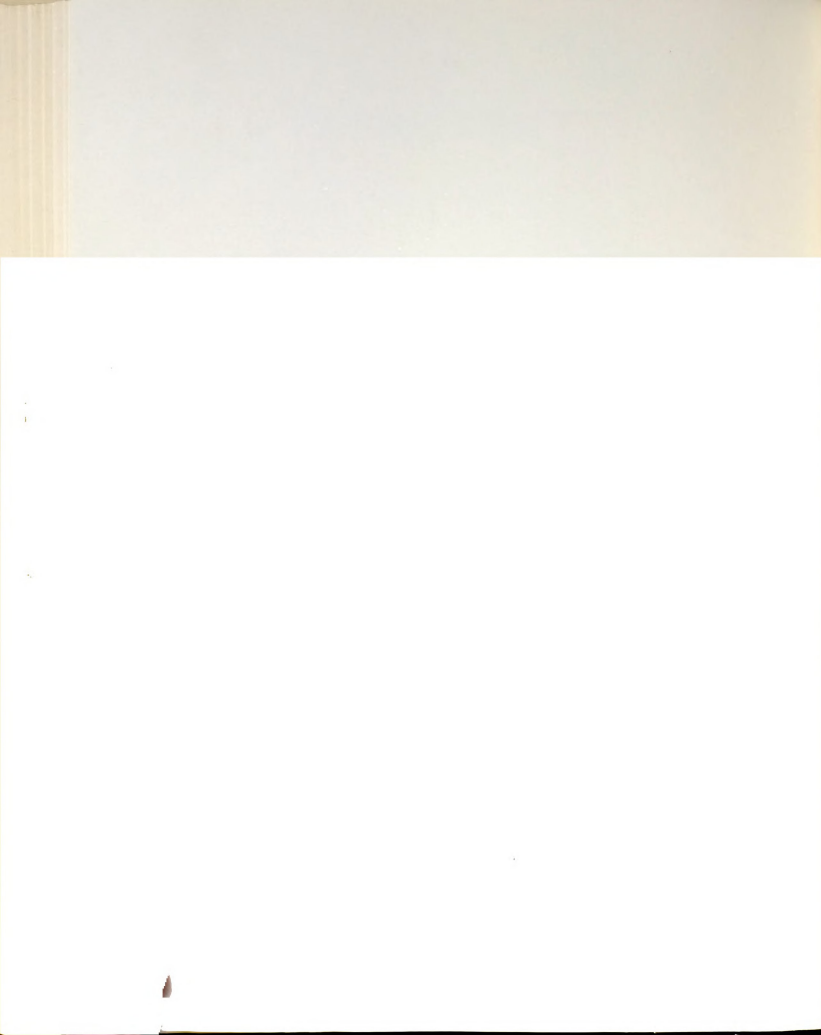
March 19, 1964

Dear Mr. [Name]

This is
and
the

APPENDIX C

DATA



Confidence Interval Mean Scores for Department Chairpersons' Administrative Functions on Six Subscales of Actual Behavior.

Vari- able	UEA	DC	DF	Ungrouped Data
A ₁	1.2181 to 2.2819	1.2157 to 1.6725	1.6562 to 1.8764	1.6296 to 1.8269
A ₂	1.5616 to 2.9359	1.8302 to 2.1364	1.9602 to 2.1592	1.9701 to 2.1469
A ₃	1.7745 to 2.8755	1.7807 to 2.2786	2.0263 to 2.1991	2.0305 to 2.1902
A ₄	1.5482 to 2.8268	1.5182 to 1.9263	1.8095 to 1.9976	1.8070 to 1.9775
A ₅	2.1053 to 3.2172	2.0915 to 2.4908	2.3142 to 2.5386	2.3196 to 2.5179
A ₆	1.9003 to 2.6997	1.9908 to 2.4241	2.1950 to 2.3440	2.1950 to 2.3318



Confidence Interval Mean Scores for Department Chairpersons' Administrative Functions on Six Subscales of Desired Behavior.

Vari- able	UEA	DC	DF	Ungrouped Data
D ₁	.9131 to 1.6669	1.1719 to 1.5681	1.4732 to 1.6772	1.4511 to 1.6319
D ₂	1.1487 to 1.6413	1.3452 to 1.6674	1.4128 to 1.5365	1.4198 to 1.5314
D ₃	1.4539 to 2.1461	1.6839 to 2.0643	1.6794 to 1.8313	1.7022 to 1.8392
D ₄	1.0446 to 1.5804	1.2007 to 1.6326	1.3395 to 1.4702	1.3423 to 1.4638
D ₅	1.3243 to 1.9607	1.5402 to 2.0058	1.5784 to 1.7282	1.5977 to 1.7360
D ₆	1.2877 to 2.1623	1.6683 to 2.0798	1.8281 to 1.9425	1.8235 to 1.9334

Mean, Range, Variance, and Standard Deviation Scores for Department Chairpersons', Department Faculty, and Upper Echelon Administrators' Perceptions of Department Chairpersons' Six Administrative Functions.

SURFILE		DEAN			
VARIABLE		TOTAL			
MEAN	2.308	STD DEV	.585	VARIANCE	.342
RANGE	1.600	MINIMUM	1.630	MAXIMUM	3.236
VALID CASES	8	MISSING CASES	0		

VARIABLE		TOTAL			
MEAN	1.579	STD DEV	.346	VARIANCE	.120
RANGE	.950	MINIMUM	1.110	MAXIMUM	2.060
VALID CASES	8	MISSING CASES	0		

VARIABLE		A1			
MEAN	1.750	STD DEV	.636	VARIANCE	.605
RANGE	1.670	MINIMUM	1.000	MAXIMUM	2.670
VALID CASES	8	MISSING CASES	0		

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VARIABLE	A2				
MEAN	2.249	STD DEV	1.822	VARIANCE	3.676
RANGE	2.500	MINIMUM	1.000	MAXIMUM	3.500
VALID CASES	8	MISSING CASES	0		

VARIABLE	A3				
MEAN	2.325	STD DEV	.658	VARIANCE	.434
RANGE	1.800	MINIMUM	1.600	MAXIMUM	3.400
VALID CASES	8	MISSING CASES	0		

VARIABLE	A4				
MEAN	2.188	STD DEV	1.765	VARIANCE	3.585
RANGE	2.250	MINIMUM	1.250	MAXIMUM	3.500
VALID CASES	8	MISSING CASES	0		

VARIABLE	A5				
MEAN	2.661	STD DEV	.665	VARIANCE	.442
RANGE	1.710	MINIMUM	1.860	MAXIMUM	3.570
VALID CASES	8	MISSING CASES	0		



GET MEANS AND CORRELATION COEFFICIENT

FILE _NONAME (CREATION DATE = 06/01/76)
 SUBFILE DEAN

VARIABLE A6					
MEAN	2.300	STD DEV	.478	VARIANCE	.229
RANGE	1.200	MINIMUM	1.700	MAXIMUM	2.900
VALID CASES	8	MISSING CASES	0		

VARIABLE D1					
MEAN	1.390	STD DEV	1.451	VARIANCE	2.03
RANGE	1.330	MINIMUM	1.000	MAXIMUM	2.330
VALID CASES	8	MISSING CASES	0		

VARIABLE D2					
MEAN	1.830	STD DEV	1.388	VARIANCE	1.890
RANGE	1.330	MINIMUM	1.300	MAXIMUM	2.630
VALID CASES	8	MISSING CASES	0		

VARIABLE D3					
MEAN	1.800	STD DEV	1.414	VARIANCE	2.171
RANGE	1.200	MINIMUM	1.200	MAXIMUM	2.400
VALID CASES	8	MISSING CASES	0		



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VARIABLE D4
MEAN      1.313      STD DEV      .320      VARIANCE      .103
RANGE     1.750      MINIMUM      1.000      MAXIMUM      1.750
VALID CASES 8      MISSING CASES 0
- - - - -
VARIABLE D5
MEAN      1.642      STD DEV      .381      VARIANCE      .145
RANGE     1.000      MINIMUM      1.140      MAXIMUM      2.140
VALID CASES 8      MISSING CASES 0
- - - - -
VARIABLE D6
MEAN      1.725      STD DEV      .523      VARIANCE      .274
RANGE     1.600      MINIMUM      1.000      MAXIMUM      2.600
VALID CASES 8      MISSING CASES 0
- - - - -

GET MEANS AND CORRELATION COEFFICIENT
FILE NONAME (CREATION DATE = 06/01/76 )
SUBFILE DEPCB

VARIABLE TOTAL
MEAN      2.042      STD DEV      .358      VARIANCE      .128
RANGE     1.540      MINIMUM      1.170      MAXIMUM      2.710
VALID CASES 27      MISSING CASES 0

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VARIABLE	TOTD			
MEAN	1.695	STD DEV	.359	VARIANCE
RANGE	1.170	MINIMUM	1.170	MAXIMUM
VALID CASES	27	MISSING CASES	0	

VARIABLE	A1			
MEAN	1.444	STD DEV	.577	VARIANCE
RANGE	2.330	MINIMUM	1.000	MAXIMUM
VALID CASES	27	MISSING CASES	0	

VARIABLE	A2			
MEAN	1.993	STD DEV	.412	VARIANCE
RANGE	1.670	MINIMUM	1.330	MAXIMUM
VALID CASES	27	MISSING CASES	0	

VARIABLE	A3			
MEAN	2.030	STD DEV	.629	VARIANCE
RANGE	2.600	MINIMUM	1.000	MAXIMUM
VALID CASES	27	MISSING CASES	0	



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VARIABLE A4
MEAN      1.722      STD DEV      .516      VARIANCE      .266
RANGE     1.750      MINIMUM     1.000      MAXIMUM     2.750
VALID CASES 27      MISSING CASES 0
- - - - -
VARIABLE A5
MEAN      2.291      STD DEV      .505      VARIANCE      .255
RANGE     2.000      MINIMUM     1.140      MAXIMUM     3.140
VALID CASES 27      MISSING CASES 0
- - - - -
GET MEANS AND CORRELATION COEFFICIENT
FILE_ NNAME_ (CREATION DATE = 06/01/76 )
SUBFILE_ DEPC_
- - - - -
VARIABLE A6
MEAN      2.217      STD DEV      .548      VARIANCE      .300
RANGE     2.000      MINIMUM     1.000      MAXIMUM     3.000
VALID CASES 27      MISSING CASES 0
- - - - -
VARIABLE D1
MEAN      1.370      STD DEV      .501      VARIANCE      .251
RANGE     2.000      MINIMUM     1.000      MAXIMUM     3.000
VALID CASES 27      MISSING CASES 0

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VARIABLE D2				
MEAN	1.506	STD DEV	.407	VARIANCE
RANGE	1.330	MINIMUM	1.000	MAXIMUM
VALID CASES	27	MISSING CASES	0	

VARIABLE D3				
MEAN	1.874	STD DEV	.461	VARIANCE
RANGE	1.800	MINIMUM	1.000	MAXIMUM
VALID CASES	27	MISSING CASES	0	

VARIABLE D4				
MEAN	1.417	STD DEV	.546	VARIANCE
RANGE	2.000	MINIMUM	1.000	MAXIMUM
VALID CASES	27	MISSING CASES	0	

VARIABLE D5				
MEAN	1.773	STD DEV	.588	VARIANCE
RANGE	2.000	MINIMUM	1.000	MAXIMUM
VALID CASES	27	MISSING CASES	0	



VARIABLE D6
 MEAN 1.874
 RANGE 2.300
 STD DEV .520
 MINIMUM 1.000
 VARIANCE 3.300
 VALID CASES 27 MISSING CASES 0

GET MEANS AND CORRELATION COEFFICIENT
 FILE NONAME (CREATION DATE = 06/01/76)
 SUBFILE FACH

VARIABLE TOTA
 MEAN 2.157
 RANGE 2.690
 STD DEV .523
 MINIMUM 1.000
 VARIANCE 3.690
 VALID CASES 197 MISSING CASES 0

VARIABLE TOTD
 MEAN 1.669
 RANGE 2.260
 STD DEV .369
 MINIMUM 1.000
 VARIANCE 3.436
 VALID CASES 197 MISSING CASES 0

VARIABLE A1
 MEAN 1.766
 RANGE 4.000
 STD DEV .784
 MINIMUM 1.000
 VARIANCE 5.614
 VALID CASES 197 MISSING CASES 0



VARIABLE	A2				
MEAN	2.060	STD DEV	.708	VARIANCE	.502
RANGE	3.330	MINIMUM	1.000	MAXIMUM	4.330
VALID CASES	197	MISSING CASES	0		

VARIABLE	A3				
MEAN	2.113	STD DEV	.615	VARIANCE	.378
RANGE	2.800	MINIMUM	1.000	MAXIMUM	3.800
VALID CASES	197	MISSING CASES	0		

VARIABLE	A4				
MEAN	1.904	STD DEV	.669	VARIANCE	.448
RANGE	3.500	MINIMUM	1.000	MAXIMUM	4.500
VALID CASES	197	MISSING CASES	0		

VARIABLE	A5				
MEAN	2.426	STD DEV	.798	VARIANCE	.638

RANGE	3.860	MINIMUM	1.000	MAXIMUM	4.860
VALID CASES	197	MISSING CASES	0		



GET MEANS AND CORRELATION COEFFICIENT

FILE NONAME (CREATION DATE = 06/01/76)
 SUBFILE FACH

VARIABLE A6

MEAN	2.270	STD DEV	.530	VARIANCE	.281
RANGE	2.600	MINIMUM	1.000	MAXIMUM	3.600
VALID CASES	197	MISSING CASES	0		

VARIABLE D1

MEAN	1.575	STD DEV	.726	VARIANCE	.527
RANGE	4.000	MINIMUM	1.000	MAXIMUM	5.000
VALID CASES	197	MISSING CASES	0		

VARIABLE D2

MEAN	1.475	STD DEV	.440	VARIANCE	.194
RANGE	2.500	MINIMUM	1.000	MAXIMUM	3.500
VALID CASES	197	MISSING CASES	0		

VARIABLE D3

MEAN	1.755	STD DEV	.541	VARIANCE	.292
RANGE	2.200	MINIMUM	1.000	MAXIMUM	3.200
VALID CASES	197	MISSING CASES	0		



VARIABLE	D4			
MEAN	1.405	STD DEV	.465	VARIANCE
RANGE	2.250	MINIMUM	1.000	MAXIMUM
VALID CASES	197	MISSING CASES	0	

VARIABLE	D5			
MEAN	1.653	STD DEV	.533	VARIANCE
RANGE	2.710	MINIMUM	1.000	MAXIMUM
VALID CASES	197	MISSING CASES	0	

VARIABLE	D6			
MEAN	1.895	STD DEV	.407	VARIANCE
RANGE	2.200	MINIMUM	1.000	MAXIMUM
VALID CASES	197	MISSING CASES	0	

GET MEANS AND CORRELATION COEFFICIENT



Frequency Tables for the Department Chairperson's Actual Administrative Behavior as Perceived by (1) Upper Echelon Administrators, (2) Department Chairpersons, and (3) Faculty.

POST	COUNT	A1								ROW TOTAL
		1.	2.	3.	4.	5.	6.	7.	8.	
1.	ROW PCT	37.5	35.3	25.0	0.0	0.0	0.0	0.0	0.0	3.4
	COL PCT	1.3	1.3	6.3	0.0	0.0	0.0	0.0	0.0	
	TOT PCT	1.3	1.3	6.3	0.0	0.0	0.0	0.0	0.0	
2.	ROW PCT	16.3	22.0	7.1	7.4	3.7	1.7	0.0	0.0	27
	COL PCT	14.4	20.3	6.1	11.8	7.7	3.7	0.0	0.0	11.6
	TOT PCT	6.9	10.6	6.1	11.8	7.7	3.7	0.0	0.0	
3.	ROW PCT	46.7	24.9	14.7	15.6	12.1	6.1	1.2	0.0	197
	COL PCT	82.9	34.5	17.9	7.6	9.2	6.3	1.2	0.0	84.9
	TOT PCT	39.7	21.1	12.5	8.6	5.2	3.2	0.0	0.0	
	ROW PCT	11.1	5.8	3.3	1.7	1.3	0.6	0.0	0.0	232
	COL PCT	47.8	25.0	14.2	7.3	5.6	3.2	0.0	0.0	100.0
	TOT PCT	47.8	25.0	14.2	7.3	5.6	3.2	0.0	0.0	

RAW CHI SQUARE = 4.4364J WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .8158

		A2								ROW TOTAL
POST	COUNT	1.	2.	3.	4.	5.				
1.	ROW PCI	50.0	50.0		0	0	0	0	0	8
	COL PCI	50.0	50.0		0	0	0	0	0	3.4
	TOT PCI	100.0	100.0		0	0	0	0	0	
2.	ROW PCI	19.4	22.9	35.3	0	1	10.4			27
	COL PCI	19.4	22.9	35.3	0	1	10.4			11.6
	TOT PCI	38.8	45.8	70.6	0	2	20.8			
3.	ROW PCI	12.2	46	16	4	9				197
	COL PCI	12.2	46	16	4	9				84.9
	TOT PCI	24.4	92.0	32.0	8.0	18.0				
	ROW PCI	52.6	19.8	6.9	1.7	3.9				232
	COL PCI	52.6	19.8	6.9	1.7	3.9				100.0
	TOT PCI	105.2	39.6	13.8	3.4	7.8				
	ROW PCI	145	56	17	4	10				232
	COL PCI	145	56	17	4	10				232
	TOT PCI	290	112	34	8	20				484

RAW CHI SQUARE = 5.13501 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .7433

RAW CHI SQUARE = 5.13501 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .7431



A3							ROW TOTAL	
POST	COUNT	1.	2.	3.	4.	5.		
1.	ROW PCT	50.0	12.5	37.3	0.0	0.0	8	3.4
	COL PCT	1.7	4.0	11.3	0.0	0.0		
	TOT PCT	1.7	4.0	11.3	0.0	0.0	27	11.6
2.	ROW PCT	85.5	14.0	0.0	0.0	0.0	197	84.9
	COL PCT	25.5	3.7	0.0	0.0	0.0		
	TOT PCT	25.5	3.7	0.0	0.0	0.0	197	84.9
3.	ROW PCT	12.1	24.7	9.3	3.6	6.0	197	84.9
	COL PCT	3.7	6.9	2.6	1.1	1.7		
	TOT PCT	12.1	24.7	9.3	3.6	6.0	197	84.9
	COUNT	148	49	22	7	6	232	100.0
	TOTAL	63.8	21.1	9.5	3.0	2.6	100.0	

RAW CHI SQUARE =

14.77421 WITH

8 DEGREES OF FREEDOM. SIGNIFICANCE =

.0637



POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL
1.	1.	25.2	25.3	12.1	37.5	00	3.4
		2.1	3.5	2.4	13.9	00	
		1.9	5.9		6.3	00	
2.	2.	22.2	10.0	22.3	7.4	11.1	11.6
		2.5	7.3	3.2	9.4	21.3	
		2.5	4.3	1.2	4.9	11.1	
3.	3.	45.2	45.4	33.3	8.6	11.1	197
		2.8	28.9	17.3	6.3	5.6	84.9
		3.4	78.4	43.1	7.3	78.7	
		3.8	19.4	15.1	7.3	4.7	
COLUMN TOTAL		97	57	42	22	60	232
		41.8	24.6	18.1	9.5	14	100.0

RAW CHI SQUARE = 14.50315 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .0696



COUNT		A5					ROW TOTAL
ROW	PCT	1.	2.	3.	4.	5.	
COL	PCT						
TOT	PCT						
1.		25.2	37.5	25.3	12.5	0.0	8
		1.0	1.3	4.3	14.3	0.0	3.4
2.		48.1	33.5	14.5	0.0	2.0	127
		19.0	13.9	5.7	0.0	0.4	11.6
3.		48.9	34.0	14.4	5.0	4.0	107
		19.1	14.0	5.7	2.0	1.6	84.9
COLUMN TOTAL		45.5	34.1	20.3	3.0	2.2	232
		94	99	47	7	5	100.0

RAW CHI SQUARE = 5.1040; WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .7464



COUNT		A5					ROW TOTAL
ROW PCT	COL PCT	1.	2.	3.	4.	5.	
1.	TOT	25.4 9.9	25.0 4.9	12.5 1.4	37.5 10.3	0.0 0.0	8 3.4
2.	TOT	14.8 9.8 1.7	48.1 15.7 5.6	37.1 14.3 4.3	0.0 0.0	0.0 0.0	27 11.6
3.	TOT	17.8 45.4 15.1	34.5 81.9 29.3	29.9 84.3 25.4	13.2 89.7 11.2	9.6 40.0 3.9	84.9 197
COLUMN TOTAL		41 17.7	83 35.8	71 30.2	29 12.5	9 3.9	232 100.0

RAW CHI SQUARE = 12.1746* WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .1436



COUNT		A7								ROW TOTAL
ROW PCT	COL PCT	1.	2.	3.	4.	5.	6.	7.	8.	
TOT PCT	TOT PCT	1.	2.	3.	4.	5.	6.	7.	8.	
1.	1.	25.3	37.5	37.3	0	0	0	0	0	3.4
2.	2.	25.3	4.7	5.1	0	0	0	0	0	11.6
3.	3.	29.6	25.9	22.3	3.7	18.5	5.5	19	197	84.9
		25.3	3.0	10.5	6.7	22.2	2.2	7.9	84.9	
		5.0	6.4	5.0	1.4	9.6	1.9	6.2	232	
		25.4	32.5	25.7	7.1	9.6	1.9	6.2	100.0	
		21.6	27.6	21.6	6.0	6.2	1.9	6.2		
COLUMN TOTAL		60	74	59	15	24	10.3	24		
		25.9	31.9	25.9	6.5	10.3	10.3	10.3		

RAW CHI SQUARE = 4.76359 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .7825



COUNT		A8								ROW TOTAL
ROW	PCT	1.	2.	3.	4.	5.	6.	7.	8.	
1.	PCT	50.0	12.5	37.3	0	0	0	0	0	8
	TOT	2.9	1.4	14.3	0	0	0	0	0	3.4
2.	PCT	1.7	7	9.3	0	0	0	0	0	27
	TOT	1.7	7	9.3	0	0	0	0	0	11.6
3.	PCT	11.9	24.4	81.3	14	5	2.5	5	5	197
	TOT	8.8	16.7	76.3	100.0	100.0	100.0	100.0	100.0	84.9
	TOT	4.1	20.7	6.9	6.0	2.2	2.2	2.2	2.2	232
	TOT	136	56	21	14	5	5	5	5	100.0
	TOT	58.6	24.1	9.1	6.0	2.2	2.2	2.2	2.2	100.0

RAM CHI SQUARE = 11.73470 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .1649



COUNT		A9					ROW TOTAL
ROW	PCT	1.	2.	3.	4.	5.	
COL	PCT	1.	2.	3.	4.	5.	
TOT	PCT	1.	2.	3.	4.	5.	
1.		37.5 12.4 1.3	37.5 14.3 1.3	12.4 9.1 1.3	12.9 9.1 1.4	0 0 0	8 3.4
2.		55.6 12.9 1.6	37.0 13.9 4.3	7.2 9.1 1.3	0 0 0	0 0 0	27 11.6
3.		107 54.3 46.1	59 29.9 25.4	9 9.5 8.2	10 5.1 9.4	2 1.0 1.9	197 84.9
COLUMN TOTAL		55.9	72	9.5	4.7	.9	232 100.0

RAW CHI SQUARE = 3.81797 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .8732

COUNT		A10								ROW TOTAL
ROW	PCT	1.	2.	3.	4.	5.	6.	7.	8.	
1.		12.5	37.5	37.5	12.5	0	0	0	0	8
		1.1	4.3	5.4	1.3	0	0	0	0	3.4
2.		33.3	37.9	14.9	12.5	2	2	27.0	2	27
		19.3	14.3	8.3	1.3	1.7	20.9	0	0	11.6
3.		77	28.9	21.5	12.5	8	8	40.0	8	197
		39.5	81.6	45.1	81.3	40.0	40.0	80.0	80.0	84.9
		33.2	24.6	18.1	5.6	3.0	3.0	3.0	3.0	
COLUMN TOTAL		87	70	49	16	10	4.3	4.3	4.3	232
		37.5	30.2	21.1	6.9	4.3	1.9	1.9	1.9	106.0

RAW CHI SQUARE = 5.15675 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .7407



A11									
COUNT	1.	2.	3.	4.	5.	6.	7.	8.	9.
ROW	1.	2.	3.	4.	5.	6.	7.	8.	9.
COL	1.	2.	3.	4.	5.	6.	7.	8.	9.
TOT	1.	2.	3.	4.	5.	6.	7.	8.	9.
1.	12.5	37.5	25.0	25.0	0.0	0.0	0.0	0.0	8
2.	1.4	4.5	3.0	7.4	0.0	0.0	0.0	0.0	3.4
3.	4.4	33.4	11.4	7.4	3.7	6.3	0.0	0.0	27
4.	1.2	13.9	15.0	7.4	3.7	6.3	0.0	0.0	11.6
5.	1.2	13.9	1.1	7.4	0.0	0.0	0.0	0.0	0.0
6.	5.7	55.5	23.7	2.3	15.0	0.0	0.0	0.0	197
7.	28.9	27.9	30.3	11.2	9.0	3.5	0.0	0.0	84.9
8.	84.4	62.1	20.3	85.9	9.0	6.5	0.0	0.0	0.0
9.	24.6	2.7	2.3	2.9	0.0	0.0	0.0	0.0	0.0
COLUMN	70.0	67	22.4	11.6	16	6.9	0.0	0.0	232
TOTAL	30.2	28.9	22.4	11.6	16	6.9	0.0	0.0	100.0



A12

COUNT	1.	2.	3.	4.	5.	ROW TOTAL
ROW PCT	52.5	25.0	15.6	0.0	0.0	8
COL PCT	4.2	2.9	2.0	0.0	0.0	3.4
TOT PCT	2.2	0.9	0.0	0.0	0.0	
1.	62.7	22.3	17.9	0.0	0.0	27
2.	15.4	2.6	1.3	0.0	0.0	11.6
3.	9.7	2.6	3.3	2.0	3.5	19.7
4.	47.7	22.3	17.9	10.0	1.5	84.9
5.	43.5	27.6	14.7	10.0	1.3	
COLUMN TOTAL	117	64	39	2	3	232
TOTAL	50.4	31.0	16.4	.9	1.3	100.0

RAW CHI SQUARE = 4.34615 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .0246



A13

COUNT		POST					ROW				
ROW		1.	2.	3.	4.	5.	TOTAL				
COL		1.	2.	3.	4.	5.					
TOT		1.	2.	3.	4.	5.					
PCT		1.	2.	3.	4.	5.					
1.		50.3	12.5	25.0	12.5	0	12.5	12.5	0	3.4	8
		1.7	2.4	7.9	7.4	0	7.4	7.4	0	3.4	8
2.		51.9	14.8	18.5	7.4	2	18.5	18.5	2	11.6	27
		11.6	10.8	5.5	1.9	7.4	10.8	10.8	7.4	11.6	27
		6.0	1.7	2.2	1.9	10.5	10.5	10.5	10.5	11.6	27
3.		19.3	32.0	35.0	10	17	32.0	32.0	17	197	44.9
		52.3	16.2	12.8	5.1	8.6	16.2	16.2	8.6	197	44.9
		85.1	19.5	8.3	7.9	8.6	19.5	19.5	8.6	197	44.9
		44.4	13.8	1.1	4.3	7.3	13.8	13.8	7.3	197	44.9
COLUMN		121	37	42	13	19	121	121	19	232	56.9
TOTAL		52.2	15.9	19.1	5.6	8.2	52.2	52.2	8.2	100.0	25.0

RAW CHI SQUARE = 1.98698 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .9816



[illegible]

RAW CHI SQUARE = 11.99155 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .1516



COUNT		A15								COUNT		A15	
ROW	COL	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
4	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
5	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
6	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
7	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
8	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
11	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
12	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
13	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
14	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
15	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
16	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
17	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
18	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
19	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
20	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
21	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
22	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
23	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
24	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
25	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
26	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
27	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
28	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
29	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
30	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
31	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
32	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
33	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
34	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
35	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
36	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
37	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
38	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
39	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
40	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
41	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
42	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
43	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
44	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
45	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
46	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
47	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
48	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
49	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
50	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
51	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
52	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
53	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
54	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
55	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
56	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
57	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
58	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
59	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
60	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
61	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
62	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
63	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
64	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
65	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
66	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
67	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
68	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
69	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
70	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
71	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
72	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
73	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
74	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
76	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
78	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
79	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
81	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
83	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
84	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
86	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
88	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
89	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
90	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
91	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
92	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
93	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
94	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
95	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
96	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
98	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
99	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
100	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
101	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
102	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
103	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
104	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
105	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
106	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
107	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
108	1	2.0	3.5	2.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
109	1	2.0	3.5	2.0	1								



A16

POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL
1.	ROW PCI	25.3	37.5	32.3	0	0	8
	COL PCI	2.9	4.3	5.3	0	0	3.4
	TOT PCI	28.2	41.8	37.6	0	0	
2.	ROW PCI	51.9	33.3	14.7	0	0	127
	COL PCI	16.0	3.9	1.7	0	0	11.6
	TOT PCI	67.9	37.2	16.4	0	0	
3.	ROW PCI	39.7	31.5	19.3	13	6	197
	COL PCI	32.2	26.7	14.3	16.6	3.0	84.9
	TOT PCI	71.9	58.2	33.6	29.6	9.0	
COLUMN TOTAL		93	74	46	13	6	232
		40.1	31.9	19.5	5.6	2.6	100.0

RAW CHI SQUARE = 6.52112 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .5891



		A17											
POST	COUNT	I					II					ROW TOTAL	
		1.	2.	3.	4.	5.	1.	2.	3.	4.	5.		
1.	POW PCI	25	12.5	37.5	25	0	12.5	37.5	25	0	0	8	
	COL PCI	2.9	1.4	1.3	18.9	0	1.3	1.3	18.9	0	0	3.4	
2.	TOT PCI	10	10	7	0	0	10	7	0	0	0	27	
		37.0	37.0	25.0	0	0	37.0	25.0	0	0	0	11.6	
3.	POW PCI	75	61	45	9	7	38.1	31.0	4.6	3.6	0	197	
	COL PCI	38.1	31.0	22.8	4.6	3.6	86.2	86.2	10.0	10.0	0	84.9	
COLUMN TOTAL		32.3	26.3	11.4	3.9	3.0	32.3	26.3	8.8	3.9	3.0	232	
		87	72	55	11	7	37.5	31.0	4.7	3.0	0	100.0	
RAW CHI SQUARE =		11.77249 WITH					8 DEGREES OF FREEDOM.					SIGNIFICANCE =	
												.1616	



A18													
COUNT	1.			2.			3.			4.			5.
ROW PCI	37.5	50.0	48.7	37.5	50.0	48.7	13.5	13.5	13.5	0	0	0	8
COL PCI	2.8	3.7	4.4	2.8	3.7	4.4	3.1	3.1	3.1	0	0	0	3.4
TOT	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	25.0	0	0	27
2.	11.4	37.0	15.6	11.4	37.0	15.6	1.3	1.3	1.3	1.7	0	0	11.6
3.	49.7	33.5	98.0	49.7	33.5	98.0	23	14.2	23	3	2	2	197
84.9	86.0	82.5	114.2	86.0	82.5	114.2	87.5	82.5	87.5	1.5	1.0	0	
197	42.2	28.4	12.1	42.2	28.4	12.1	12.1	12.1	12.1	1.3	1.0	0	
232	114	89	156	114	89	156	32	32	32	4	2	0	
100.0	49.1	34.5	98.0	49.1	34.5	98.0	13.9	13.9	13.9	1.7	.9	0	
COLUMN TOTAL													

RAW CHI SQUARE = 2.23426 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .9730

A19

COUNT										ROW TOTAL	
POST	COL PCT	1.	2.	3.	4.	5.	6.	7.	8.		
1.	1.	0	2	5	2	0	2	0	0	8	3.4
2.	2.	0	2	5	2	0	2	0	0	8	3.4
3.	3.	0	2	5	2	0	2	0	0	8	3.4
		14.8	18.2	20.3	20.3	20.3	20.3	20.3	20.3	11.6	11.6
		1.7	6.0	3.4	3.4	3.4	3.4	3.4	3.4	19.7	84.9
		4.5	5.9	6.3	6.3	6.3	6.3	6.3	6.3	19.7	84.9
		22.8	29.9	33.3	33.3	33.3	33.3	33.3	33.3	197	849.9
		91.8	78.7	84.3	84.3	84.3	84.3	84.3	84.3	197	849.9
		19.4	2.5	2.8	8.2	8.2	8.2	8.2	8.2	197	849.9
		49	75	79	22	22	22	22	22	232	100.0
		21.1	32.3	33.6	9.5	9.5	9.5	9.5	9.5	100.0	100.0
COLUMN TOTAL		11.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	11.3	11.3

RAW CHI SQUARE = 11.31263 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .1846



A20											
POST	COUNT	1.	2.	3.	4.	5.	6.	7.	8.	ROW	TOTAL
1.	ROW	0	12	6	25	0	0	0	8		
	COL	0	5	3	7	0	0	0	3		
	TOT	0	17	9	32	0	0	0	11		
2.	ROW	25	37	33	0	0	0	1	27		
	COL	9	16	3	0	0	0	3	11		
	TOT	34	53	36	0	0	0	4	104		
3.	ROW	22	25	42	25	16	16	16	197		
	COL	11	12	21	12	8	8	8	84		
	TOT	33	37	63	37	24	24	24	232		
COLUMN	TOT	29	62	97	116	27	17	7	100		

RAW CHI SQUARE = 13.98973 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .0020



COUNT		A21					ROW TOTAL	
POST		1.	2.	3.	4.	5.		
ROW PCT								
COL PCT								
TOT PCT								
1.		25.0	37.5	25.0	12.5	0	8	3.4
		4.3	6.5	4.3	2.1	0		
2.		25.0	37.5	25.0	12.5	0	27	11.6
		4.3	6.5	4.3	2.1	0		
3.		18.8	28.1	18.8	9.4	12	197	84.9
		3.3	5.0	3.3	1.6	2		
COLUMN TOTAL		20.3	35.8	31.3	7.3	12	232	100.0
		4.7	8.3	7.3	1.7	5.2		

RAW CHI SQUARE = 3.23738 WITH 8 DEGREES OF FREEDOM, SIGNIFICANCE = .9186

		A22											
POST	COUNT ROW COL TOT	1.	2.	3.	4.	5.	ROW TOTAL						
		PCT	PCT	PCT	PCT	PCT							
1.	1.	25.0 22.9	50.0 59.7	25.0 33.3	0.0 0.0	0.0 0.0	8 3.4						
2.	2.	40.7 12.9	37.0 13.3	18.5 9.2	3.7 8.3	0.0 0.0	27 11.6						
3.	3.	7.4 37.6 31.6	5.8 29.4 25.0	22.3 85.3 19.7	11 51.6 91.7	10 3.1 4.3	197 84.9						
	COLUMN TOTAL	87 37.5	72 31.0	51 22.1	12 5.2	10 4.3	232 106.0						
RAW CHI SQUARE =		4.37003 WITH					8 DEGREES OF FREEDOM.		SIGNIFICANCE = .0223				



COUNT		A23								ROW TOTAL
POST	COL PCT	1.	2.	3.	4.	5.	6.	7.	8.	
1.	1.	0	0	37.2	62.5	0	5.5	0	5.1	3.4
2.	2.	10.5	25.7	29.3	18.5	18.5	10.2	22.2	11.6	11.6
3.	3.	17	17	35.3	20.9	17	4.9	77.3	197	84.9
		89.5	88.3	82.2	80.2	77.3	17.2	92.5	232	100.0
COLUMN TOTAL		19	60	34.9	21.6	9.5				

RAW CHI SQUARE = 12.84252 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .1174



A24

POST	COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	5.	ROW TOTAL
1.	12	15.4	12.5	14.4	12.5	14.4	50.7	25.0	0.0	8
2.	18	22.5	15.0	18.8	15.0	18.8	37.5	14.0	0.0	27
3.	25	31.3	20.0	25.6	20.0	25.6	27.3	10.6	9.0	84.9
COLUMN TOTAL	57	24.6	31.9	31.9	29.7	29.7	23.3	3.9	3.9	232
										100.0

RAW CHI SQUARE = 7.46049 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .04941



COUNT		A25					COUNT		A25					COUNT	
ROW	PCT	1.	2.	3.	4.	5.	ROW	PCT	1.	2.	3.	4.	5.	ROW	PCT
COL	PCT	1.	2.	3.	4.	5.	COL	PCT	1.	2.	3.	4.	5.	COL	PCT
TOT	TOT	1.	2.	3.	4.	5.	TOT	TOT	1.	2.	3.	4.	5.	TOT	TOT
1.		4	2	2	0	0	1.		4	2	2	0	0	1.	
		50.0	25.0	25.0	0.0	0.0			50.0	25.0	25.0	0.0	0.0		
		4.4	2.5	3.9	0.0	0.0			4.4	2.5	3.9	0.0	0.0		
		1.7	.9	.9	0.0	0.0			1.7	.9	.9	0.0	0.0		
2.		7	13	7	0	0	2.		7	13	7	0	0	2.	
		25.9	48.1	25.9	0.0	0.0			25.9	48.1	25.9	0.0	0.0		
		7.0	16.5	13.2	0.0	0.0			7.0	16.5	13.2	0.0	0.0		
3.		8	6	4	7	2	3.		8	6	4	7	2	3.	
		40.6	32.5	23.3	35.6	10.0			40.6	32.5	23.3	35.6	10.0		
		87.9	81.0	83.3	100.0	100.0			87.9	81.0	83.3	100.0	100.0		
		34.5	27.6	19.1	35.6	100.0			34.5	27.6	19.1	35.6	100.0		
COLUMN		91	79	53	7	2	COLUMN		91	79	53	7	2	COLUMN	
TOTAL		39.2	34.1	22.8	3.0	.9	TOTAL		39.2	34.1	22.8	3.0	.9	TOTAL	
RAW CHI SQUARE =		5.21000 WITH					RAW CHI SQUARE =		5.21000 WITH					RAW CHI SQUARE =	
		8 DEGREES OF FREEDOM.							8 DEGREES OF FREEDOM.						
		SIGNIFICANCE =							SIGNIFICANCE =						
		.7349							.7349						



A26											
POST	COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	5.	ROW TOTAL	
1.	63.5	12.5	11.4	25.9	5	12.5	25.9	0	0	8	
	3.2	1.1	1.4	8.3	2	1.1	8.3	0	0	3.4	
2.	77.8	19.5	17.2	34.0	21	19.5	34.0	0	0	27	
	19.1	7.4	4.2	17.4	1	7.4	17.4	0	0	11.6	
3.	53.8	31.5	26.7	88.0	10	31.5	88.0	6	1	197	
	45.7	26.7	26.7	99.5	3	26.7	99.5	3	5	84.9	
COLUMN TOTAL	132	68	68	25	10.8	29.3	10.8	2.6	1	232	
	56.9	29.3	29.3	10.8	10.8	29.3	10.8	2.6	.4	100.0	

RAW CHI SQUARE = 8.62894 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .3746



POST	A27					ROW TOTAL
	COUNT	ROW PCT	COL PCT	TOT PCT		
1.	25.0	10.9	3.7	1.7	12.5	8
2.	3.7	5.3	1.7	1.7	2.8	3.4
3.	16.1	8.1	1.7	1.7	3.7	27
	94.1	8.1	1.7	1.7	2.8	11.6
	6.9	8.1	1.7	1.7	3.7	197
	17.3	8.2	1.7	1.7	14.7	84.9
COLUMN TOTAL	19	8.2	8.3	35.8	35.9	232
					15.9	100.0

RAW CHI SQUARE = 13.82800 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .0864



A. 2488.



A29

COUNT		POST					ROW TOTAL
ROW	PCT	1.	2.	3.	4.	5.	
1.		25.0 2.5	62.5 5.2		12.5 1.4		8 3.4
2.		29.6 9.9	14.3 16.3	14.3 8.3	0 0	3.7 20.0	27 11.6
3.		36.4 9.7	67 7.9	43 21.3	12 6.1	4 20.0	197 84.9
COLUMN TOTAL		34.9 8.1	86 37.1	47 20.3	13 5.6	5 2.2	232 100.0

RAW CHI SQUARE = 9.61523 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .3410

the 1990s, the number of people in the world who are under 15 years of age is expected to increase by 1.5 billion (United Nations 1994).

There is a growing awareness of the need to take account of the needs of children in the development of health care systems. The World Health Organization (WHO) has developed a series of guidelines for the development of health care systems for children (WHO 1990). These guidelines are based on the principle that children are not just small adults, but have their own unique needs and characteristics. The guidelines are organized into four main areas: (1) the organization of health care services, (2) the training of health care workers, (3) the development of health care facilities, and (4) the development of health care policies.

The first guideline is that health care services should be organized to meet the needs of children. This means that health care services should be accessible to all children, regardless of their social or economic status. Health care services should also be organized to meet the specific needs of different age groups of children. For example, health care services for infants and young children should be organized differently from health care services for older children and adolescents.

The second guideline is that health care workers should be trained to meet the needs of children. This means that health care workers should receive training in the specific needs and characteristics of children. Health care workers should also be trained in the principles of child development and the principles of child health care. Health care workers should also be trained in the principles of child protection and the principles of child abuse prevention.

The third guideline is that health care facilities should be developed to meet the needs of children. This means that health care facilities should be designed to be child-friendly and safe. Health care facilities should also be designed to be accessible to all children, regardless of their physical or mental disabilities. Health care facilities should also be designed to be culturally sensitive and to meet the needs of different ethnic groups of children.

The fourth guideline is that health care policies should be developed to meet the needs of children. This means that health care policies should be based on the principles of child development and the principles of child health care. Health care policies should also be based on the principles of child protection and the principles of child abuse prevention. Health care policies should also be based on the principles of child participation and the principles of child empowerment.

The WHO guidelines are a valuable resource for the development of health care systems for children. They provide a framework for the development of health care systems that are based on the needs and characteristics of children. The WHO guidelines are also a valuable resource for the development of health care policies that are based on the needs and characteristics of children.

The WHO guidelines are a valuable resource for the development of health care systems for children. They provide a framework for the development of health care systems that are based on the needs and characteristics of children.

POST	COUNT			A30								ROW TOTAL
	ROM TOT	PCI TOT	PCI TOT	1.	2.	3.	4.	5.	6.	7.	8.	
1.	62	4	2	5	0	25	12	0	0	0	8	3.4
2.	51	9	13	14	29	7	7	12	14	14	27	11.6
3.	43	7	8	86	22	21	17	6	35	2	197	84.9
COLUMN TOTAL	105	45.3	22.8	53	47	20.3	8.6	3.0	7	232	106.0	

RAW CHI SQUARE = 6.26746 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .6173



POST	A31								ROW TOTAL
	COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	5.
1.	37.5	12.5	12.5	12.5	37.5	37.5	12.5	0	12.5
	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0	1.3
2.	51.9	18.5	18.5	18.5	51.9	51.9	18.5	2	18.5
	12.1	4.2	4.2	4.2	12.1	12.1	4.2	3	12.1
	6.0	2.2	2.2	2.2	6.0	6.0	2.2	3	6.0
3.	99	34.5	34.5	34.5	99	99	34.5	4	34.5
	50.3	17.5	17.5	17.5	50.3	50.3	17.5	0	17.5
	85.7	29.5	29.5	29.5	85.7	85.7	29.5	0	29.5
	42.7	14.8	14.8	14.8	42.7	42.7	14.8	1	14.8
COLUMN TOTAL	116	53	53	53	116	116	53	6	53
	50.0	22.8	22.8	22.8	50.0	50.0	22.8	2	22.8

RAM CHI SQUARE = 24.91863 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .0016



A32										
POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL			
	ROW PCT									
	COL PCT									
	TOT									
1.	1.	4	2	1	1	5.	13	8		
		50.0	25.0	25.0	0	0	100.0	3.4		
		3.0	3.6	5.9	0	0				
		1.7								
2.	2.	2	2	1	3	1	9	27		
		77.4	7.4	0	11.1	1.1	100.0	11.6		
		15.7	3.6	0	60.0	1.3				
		9.1								
3.	3.	109	52	32	2	2	197	197		
		55.3	26.4	16.2	1.0	1.0	100.0	84.9		
		3.3	92.9	94.1	40.0	66.7				
		81.0	22.4	13.8	9	9				
		47.1								
COLUMN TOTAL		134	56	34	5	3	232	232		
		57.8	24.1	16.7	2.2	1.3	100.0	100.0		

RAW CHI SQUARE = 23.43105 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .0029



		A33						
POST	COUNT	I I I I I					ROW TOTAL	
		ROW PCT						
		COL PCT						
1.	TOT PCT	1.	2.	3.	4.	5.		
		I	I	I	I	I		
1.		37.5	12.5	50.0	0.0	0.0	3.6	8
		3.4	1.4	6.7	0.0	0.0		
		1.3	.4	1.7	0.0	0.0		
2.		40.7	37.0	18.3	3.7	0.0	11.6	27
		12.6	17.9	8.2	6.3	0.0		
		4.7	4.3	2.5	1.4	0.0		
3.		37.1	45	52	15	12	84.9	197
		83.9	22.8	26.2	7.6	10.0		
		31.5	19.4	22.4	9.5	12.2		
COLUMN TOTAL		97	56	61	16	12	232	
		37.5	24.1	26.3	6.9	5.2	100.0	

RAW CHI SQUARE = 8.09438 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .00243



COUNT		A34					ROW TOTAL
POST	ROW PCI COL PCI TOT PCI	1.	2.	3.	4.	5.	
1.	1.	0	6	2	0	0	8
	TOT	0	75.0	25.0	0	0	3.4
2.	1.	10	10	3	3	1	27
	TOT	37.0	37.0	11.0	11.0	3.0	11.6
3.	1.	4	4	1	1	4	19
	TOT	12.0	13.0	1.0	1.0	4.0	84.9
COLUMN TOTAL	1.	37.0	29.9	26.3	4.1	4	232
	TOT	83	75	58	11	5	100.0

RAW CHI SQUARE = 13.73852 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .0000



COUNT		A35					ROW TOTAL
POST	ROW PCT	1.	2.	3.	4.	5.	
1.	1.	0	12	25	37	25	8
		0	4	2	5	3	3.4
		0	2	5	6	3	
		0	4	9	1	9	
2.	2.	3	14	29	18	33	27
		4	8	5	5	7	11.6
		2	7	3	2	7	
		1	1	3	2	7	
3.	3.	23	19	37	39	43	197
		7	9	17	8	21	84.9
		5	22	8	3	18	
		9	8	11	3	6	
COLUMN TOTAL		10.3	10.3	35.8	20.3	23.3	232
					47	54	103.0

RAW CHI SQUARE = 6.19759 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .5251



Frequency Tables for the Department Chairperson's Desired Administrative Behavior as Perceived by (1) Upper Echelon Administrators, (2) Department Chairpersons, and (3) Faculty.

D1									
COUNT									
ROW PCT									
COL PCT									
TOT PCT	1.1	2.1	3.1	4.1	5.1				
1.	6	1	1	0	0				
	75.0	12.5	12.5	0	0				
	5.1	2.5	2.5	0	0				
	2.6	.4	.4	0	0				
2.	17	4	4	0	1				
	63.0	18.5	14.8	0	3.7				
	14.4	10.5	10.0	0	6.7				
	7.3	2.5	1.7	0	.4				
3.	95	44	35	0	14				
	48.2	22.7	17.8	4.6	7.1				
	80.5	34.5	37.5	13.3	93.3				
	40.9	19.2	15.1	3.9	6.0				
COLUMN	118	53	40	9	15				
TOTAL	50.9	21.6	17.2	3.9	6.5				
						232			
						100.0			

RAW CHI SQUARE = 5.22673 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .7331

1997

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		D2											
POST	COUNT											ROW TOTAL	
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.		
1.	ROW PCT	6	25.0	0	0	0	0	0	0	0	0	8	
	COL PCT	3.4	5.9	0	0	0	0	0	0	0	0	3.4	
	TOT PCT	2.6	5.9	0	0	0	0	0	0	0	0		
2.	ROW PCT	23	3	1	0	0	0	0	0	0	0	27	
	COL PCT	85.2	11.1	3.7	0	0	0	0	0	0	0	11.6	
	TOT PCT	13.1	8.4	6.3	0	0	0	0	0	0	0		
		9.9	1.7	.4	0	0	0	0	0	0	0		
3.	ROW PCT	147	29	15	1	5	5	5	5	5	5	197	
	COL PCT	74.6	14.7	7.6	.5	2.5	2.5	2.5	2.5	2.5	2.5	84.9	
	TOT PCT	83.5	85.3	93.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
		63.4	12.5	6.5	.4	2.2	2.2	2.2	2.2	2.2	2.2		
COLUMN TOTAL		176	34	16	1	5	5	5	5	5	5	232	
		75.9	14.7	6.9	.4	2.2	2.2	2.2	2.2	2.2	2.2	100.0	

RAW CHI SQUARE = 3,330.35 WITH 8 DEGREES OF FREEDOM, SIGNIFICANCE = .9119

RAW CHI SQUARE = 3.33035 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .9119



COUNT		D3						ROW TOTAL	
POST	COL PCT	1.	2.	3.	4.	5.	6.	TOTAL	
1.		6	2	0	0	0	0	8	
		75.0	25.0	0	0	0	0	3.4	
		3.1	9.5	0	0	0	0		
		2.6	.6	0	0	0	0		
2.		22	3	3	0	0	0	27	
		81.5	7.4	11.1	0	0	0	11.6	
		11.5	9.5	27.3	0	0	0		
		9.5	.6	1.3	0	0	0		
3.		164	17	8	4	4	4	197	
		83.2	8.6	4.1	2.0	2.0	2.0	84.9	
		85.4	81.3	72.7	100.0	1.8.3	1.8.3		
		70.7	7.7	3.4	1.7	1.7	1.7		
COLUMN TOTAL		192	21	11	4	4	4	232	
		82.8	9.1	4.7	1.7	1.7	1.7	100.0	

RAM CHI SQUARE = 6.74013 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .5649



D4										ROW TOTAL	A
COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	5.			
1.	6	75.0	25.0	2	2	2	2	2	3.4	3.4	
	4.1	6.9	6.9	1	1	1	1	1	0	0	
	2.6	9	9	1	1	1	1	1	0	0	
2.	12	44.4	29.6	8	8	8	8	8	1	1	
	8.1	11.4	27.6	16.7	16.7	16.7	16.7	16.7	3.7	3.7	
	5.2	2.6	3.4	4	4	4	4	4	20.0	20.0	
3.	130	39	19	5	5	5	5	5	4	4	
	66.0	19.8	9.6	2.5	2.5	2.5	2.5	2.5	2.0	2.0	
	87.8	86.6	65.5	83.3	83.3	83.3	83.3	83.3	30.3	30.3	
	56.0	14.8	8.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	
COLUMN TOTAL	148	48	29	6	6	6	6	6	5	5	
	63.8	19.7	12.5	2.6	2.6	2.6	2.6	2.6	2.2	2.2	
									100.0	100.0	

RAI CHI SQUARE = 12.93166 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .1142



D5		COUNT						ROW TOTAL				
POST	D5	COUNT		ROW PCT		COL PCT		1.	2.	3.	4.	5.
		TOT PCT		TOT PCT		TOT PCT						
1.	1.	6	75.0	25.0	0	0	0	0	0	0	0	0
	2.	3.8	2.6	3.4	0	0	0	0	0	0	0	0
	3.	20	74.1	22.2	3.7	6.7	4	0	0	0	0	0
	4.	12.8	8.6	15.7	1	1	0	0	0	0	0	0
2.	1.	130	66.0	25.4	7.1	93.3	10.0	1.0	1.0	1.0	1.0	1.0
	2.	83.3	56.0	21.6	6.0	15	2	1	1	1	1	1
	3.	156	67.2	25.5	6.5	6.5	2	1	1	1	1	1
	4.	COLUMN TOTAL	232	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

RAW CHI SQUARE = 1.89371 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = .9841



D6

POST	COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	5.	ROW TOTAL
1.	5	62.5	37.5	100.0	1.1	2.1	3.1	4.1	5.1	8
	4.3	13.8	10.8	24.1						3.4
	2.2	6.9	4.7	11.6						
2.	16	59.3	37.8	97.1			1			27
	13.8	50.0	31.3	81.3			3.7			11.6
	6.9	25.0	15.6	40.9			5.3			
							.4			
3.	95	48.2	40.6	88.8			18			197
	81.9	40.9	34.5	75.4			9.1			84.9
	40.9	20.4	16.3	36.7			19.7			
							.5			
							103.0			
							7.8			
							.4			
COLUMN TOTAL	116	50.0	45.1	95.1			19			232
							8.2			100.0
							.4			
							1.3			

RAH CHI SQUARE = 3.17193 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = .9231



D7									
COUNT	I								
ROW PCT	I								
COL PCT	I								
TOT PCT	I								
	1, I	2, I	3, I	4, I	5, I	ROW TOTAL			
1.	5	1	2	0	0	8			
	62.5	12.5	25.0	0	0	3,4			
	4,3	1,5	5,4	0	0				
	2,2	1,4	9	0	0				
2.	13	9	4	0	2	27			
	48,1	29,6	14,8	0	7,4	11,6			
	11,2	12,3	10,8	0	22,2				
	5,6	3,4	1,7	0	9				
3.	98	56	31	5	7	197			
	49,7	28,4	15,7	2,5	3,6	84,9			
	84,5	86,2	83,8	10,0	77,8				
	42,2	24,1	13,4	2,2	3,0				
COLUMN TOTAL	116	65	37	5	9	232			
	50,0	28,0	15,9	2,2	3,9	100,0			

AN CHI SQUARE = 3,55271 WITH 8 DEGREES OF FREEDOM, SIGNIFICANCE = .8951



D8					
COUNT	1	2	3	4	ROW TOTAL
ROW PCT	1	2	3	4	
COL PCT	1	2	3	4	
TOT PCT	1	2	3	4	
1.	5	7	0		8
	62.5	37.5	0		3.4
	2.5	9.7	0		
	2.2	1.1	0		
2.	25	1	1		27
	92.6	3.7	3.7		11.6
	12.7	3.2	25.0		
	10.8	.4	.4		
3.	167	27	3		197
	84.8	13.7	1.5		84.9
	84.8	87.1	75.0		
	72.0	11.6	1.3		
COLUMN TOTAL	197	31	4		232
	84.9	13.4	1.7		103.0

BRAN CHI SQUARE = 6.84931 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .1440

RAW CHI SQUARE = 6.84931 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .1440



COUNT		D9				ROW			
		PCT				TOTAL			
PCT		1.1				2.1			
TOT		3.1				4.1			
1.	1	6	1	2	1	0	1	0	1
	1	75.0	1	25.0	1	0	1	0	1
	1	3.2	1	4.8	1	0	1	0	1
	1	2.6	1	.6	1	0	1	0	1
2.	1	21	1	5	1	1	1	0	1
	1	77.8	1	18.5	1	3.7	1	0	1
	1	11.2	1	11.9	1	50.0	1	0	1
	1	9.1	1	2.2	1	.4	1	0	1
3.	1	160	1	35	1	1	1	1	1
	1	81.2	1	17.8	1	.5	1	.5	1
	1	85.6	1	83.3	1	50.0	1	100.0	1
	1	69.0	1	15.1	1	.4	1	.4	1
COLUMN		187		42		2		1	232
TOTAL		80.6		18.1		.9		.4	10.0

RAW CHI SQUARE = 3.3555 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = .7631



		D10							
POST	COUNT	COUNT						ROW TOTAL	ROW TOTAL
		COUNT							
		1.1	2.1	3.1	4.1	5.1	6.1		
1.	ROW PCT	2	5	1	0	0	0	8	
	COL PCT	25.0	62.5	12.5	0	0	0	3.4	
	TOT PCT	1.7	7.4	2.5	0	0	0		
		.9	2.2	.4	0	0	0		
2.	ROW PCT	11	10	4	0	2		27	
	COL PCT	40.7	37.0	14.8	0	7.4		11.6	
	TOT PCT	9.5	15.2	10.0	0	33.3			
		4.7	4.3	1.7	0	.9			
3.	ROW PCT	103	51	35	4	4		197	
	COL PCT	52.3	25.9	17.8	2.0	2.0		84.9	
	TOT PCT	88.8	77.3	87.5	10.0	66.7			
		44.4	22.5	15.1	1.7	1.7			
	COLUMN TOTAL	116	66	40	4	6		232	
		50.0	28.4	17.2	1.7	2.6		100.5	

RAW CHI SQUARE = 9.8907C WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .272E

RAW CHI SQUARE = 9.8907C WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .2728



D11

POST	COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	5.	ROW TOTAL
1.	37.5	25.0	25.0	25.0	1	2	1	1	0	5
	2.7	3.8	4.7	6.3	1	1	1	1	0	4
	1.3	.5	.9	.4	1	1	1	1	0	4
2.	13	4	7	1	1	1	1	1	2	27
	48.1	14.8	25.9	3.7	1	1	1	1	7.4	11.6
	11.7	7.5	16.3	6.3	1	1	1	1	22.2	11.6
	5.6	1.7	3.0	.4	1	1	1	1	.9	4
3.	95	47	34	14	1	1	1	1	7	197
	48.2	23.6	17.3	7.1	1	1	1	1	3.6	84.9
	85.6	88.7	79.1	87.5	1	1	1	1	77.8	84.9
	40.9	22.3	14.7	6.6	1	1	1	1	3.0	40.9
COLUMN TOTAL	111	53	43	16	9	9	9	9	9	232
TOTAL	47.8	22.6	18.5	6.9	3.9	3.9	3.9	3.9	3.9	100.0

RAH CHI SQUARE = 4,208.6 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .8379

D12

POST	COUNT		ROW		COL		TOT		PCT		ROW		COL		TOT	
	I		I		I		I		I		I		I		I	
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1.	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	87.5	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.6	1.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3.3	.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.	17	7	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	63.0	25.6	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
	13.6	13.2	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
	7.3	3.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
3.	101	65	28	5	5	5	5	5	5	5	5	5	5	5	5	5
	51.3	30.5	14.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	80.8	88.2	90.3	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0
	43.5	25.6	12.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
COLUMN TOTAL	125	65	31	5	5	5	5	5	5	5	5	5	5	5	5	5
	53.9	29.3	13.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	232	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6

RAI CHI SQUARE = 6.00559 WITH 8 DEGREES OF FREEDOM, SIGNIFICANCE = .6466

D13

POST	COUNT	1	2	3	4	ROW TOTAL
1.	1	5	3	3	0	8
	2	62.5	37.5	37.5	0	3.4
	3	3.1	10.7	10.7	0	
	4	2.2	1.3	1.3	0	
2.	1	17	7	7	0	27
	2	63.0	25.9	25.9	0	11.6
	3	10.7	25.0	25.0	0	
	4	7.3	3.0	3.0	0	
3.	1	137	18	18	3	197
	2	69.5	9.1	9.1	1.5	84.9
	3	86.2	64.3	64.3	103.0	
	4	59.1	7.8	7.8	1.3	
COLUMN TOTAL		159	28	28	3	232
		68.5	12.1	12.1	1.3	100.0

RAV CHI SQUARE = 13.20234 WITH 6 DEGREES OF FREEDOM, SIGNIFICANCE = .0399



D14

POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL
ROW PCT							
COL PCT							
TOT PCT							
1.		2	3	3	0	0	8
		25.0	37.5	37.5	0	0	100.0
		2.4	3.6	5.2	0	0	11.2
		.9	1.3	1.3	0	0	3.4
2.		7	6	11	1	0	25
		25.9	29.6	40.7	3.7	0	100.0
		8.4	9.6	19.0	1.7	0	38.7
		3.0	3.4	4.7	.4	0	11.5
3.		74	72	44	5	2	197
		37.6	36.5	22.3	2.5	1.0	100.0
		89.2	86.7	75.9	8.3	10.0	269.1
		31.9	31.2	19.0	2.2	.9	85.0
COLUMN		63	37	58	6	2	166
TOTAL		35.8	35.8	25.0	2.6	.9	100.0

RAJ CHI SQUARE = 5.92237 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .6559



D15

POST	COUNT	1.	2.	3.	4.	ROW TOTAL
1.	ROW PCT	7	1	0	0	8
	COL PCT	87.5	12.5	0	0	3.4
	TOT PCT	4.1	1.6	0	0	
		3.0	.4	0	0	
2.	ROW PCT	19	7	0	1	27
	COL PCT	70.4	25.9	0	3.7	11.6
	TOT PCT	11.2	12.7	0	100.0	
		6.2	3.5	0	.4	
3.	ROW PCT	143	47	7	0	197
	COL PCT	72.6	23.9	3.6	0	34.9
	TOT PCT	84.6	85.6	100.0	0	
		61.6	28.7	3.0	0	
COLUMN TOTAL		169	55	7	1	232
		72.8	23.7	3.0	.4	1.0.0

RAU CHI SQUARE = 9.57878 WITH 6 DEGREES OF FREEDOM, SIGNIFICANCE = .1436



D16

POST	COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	5.	ROW TOTAL
1.	5	62.5	37.5	100	1.1	2.1	3.1	4.1	5.1	P
	3.2	4.6	0	0	0	0	0	0	0	3.4
	2.2	1.7	0	0	0	0	0	0	0	
2.	21	77.6	11.1	88.7	3	3	3	0	0	27
	13.4	5.6	17.6	23	11.1	17.6	11.1	0	0	11.6
	9.1	1.7	1.3	2.7	1.3	1.3	1.3	0	0	
3.	131	66.5	24.4	90.9	48	14	14	3	1	197
	83.4	8.6	32.4	41	7.1	32.4	10.5	1.5	.5	84.9
	56.5	2.7	6.9	9.6	6.9	6.9	1.3	1.3	.4	
COLUMN TOTAL	157	54	17	73	17	7.3	1.3	3	1	232
	67.7	23.3	7.3	1.3	23.3	7.3	1.3	1.3	.4	100.6

RAO CHI SQUARE = 4.82918 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .7757



D17

POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL
1.	ROW PCT	3	5	0	0	0	8
	COL PCT	37.5	62.5	0	0	0	3.4
	TOT PCT	2.1	7.4	0	0	0	
		1.3	2.2	0	0	0	
2.	ROW PCT	17	5	5	0	0	27
	COL PCT	63.0	18.5	18.5	0	0	11.6
	TOT PCT	12.0	7.4	33.3	0	0	
		7.3	2.2	2.2	0	0	
3.	ROW PCT	122	58	10	5	2	197
	COL PCT	61.9	29.4	5.1	2.5	1.0	84.9
	TOT PCT	85.9	85.3	66.7	100.0	100.0	
		52.6	25.3	4.3	2.2	.9	
COLUMN TOTAL		142	68	15	5	2	232
		61.2	29.3	6.5	2.2	.9	100.0

RAW CHI SQUARE = 13.26129 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .1032



D18

POST	COUNT ROW PCT COL PCT TOT PCT	1.1	2.1	3.1	5.1	ROW TOTAL
1.	7 87.5 4.3 3.0	1 12.5 1.6 .4	0 0 0 0	0 0 0 0	0 0 0 0	8 3.4
2.	21 77.8 13.0 9.1	7 11.1 4.6 1.3	2 7.4 28.6 9.9	1 3.7 10.0 .4	1 3.7 10.0 .4	27 11.6
3.	134 68.0 82.7 57.8	5 29.4 93.5 25.5	5 2.5 71.4 2.2	0 0 0 0	0 0 0 0	197 64.9
COLUMN TOTAL	162 69.8	65 26.7	7 3.0	1 .4	1 .4	232 10.0

RAI CHI SQUARE = 14.01582 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .0295



D19

COUNT		POST				ROW	
ROW PCT	COL PCT	1.	2.	3.	4.	TOTAL	
1.		4	2	1	3	8	
		50.0	37.5	12.5	0	3.4	
		3.3	3.5	2.9	0		
		1.7	1.7	.4	0		
2.		14	7	6	0	27	
		51.9	25.5	22.2	0	11.6	
		11.7	9.2	17.1	0		
		6.0	3.2	2.6	0		
3.		102	66	28	1	197	
		51.8	33.5	14.2	.5	64.9	
		85.0	86.8	60.0	100.0		
		44.0	26.4	12.1	.4		
COLUMN		120	77	35	1	232	
TOTAL		51.7	32.5	15.1	.4	1.9.3	

RAI CHI SQUARE = 1.70178 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .9450



D20

POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL
1.	ROW PCT	3	4	1	0	0	8
	COL PCT	37.5	50.0	12.5	0	0	3.4
	TOT PCT	2.8	4.0	3.1	0	0	
		1.3	1.7	.4	0	0	
2.	ROW PCT	13	15	4	0	0	27
	COL PCT	48.1	37.5	14.8	0	0	11.6
	TOT PCT	11.9	11.9	12.5	0	0	
		5.6	4.2	1.7	0	0	
3.	ROW PCT	93	75	27	5	2	197
	COL PCT	47.2	35.2	13.7	2.5	1.0	84.9
	TOT PCT	85.3	83.3	84.4	10.0	1.0	
		40.1	38.2	11.6	2.2	.9	
COLUMN TOTAL		109	84	32	5	2	232
		47.0	36.2	13.8	2.2	.9	100.0

ROW CHI SQUARE = 1.86814 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .9843



D21

POST	COUNT	1.1	2.1	3.1	4.1	5.1	ROW TOTAL
1.	ROW PCT	5	3	0	0	0	8
	COL PCT	62.5	37.5	0	0	0	3.4
	TOT PCT	4.4	3.5	0	0	0	
		2.2	1.3	0	0	0	
2.	ROW PCT	15	5	6	1	0	27
	COL PCT	55.6	18.5	22.2	3.7	0	11.6
	TOT PCT	13.3	6.4	16.7	25.0	0	
		6.5	2.2	2.6	.4	0	
3.	ROW PCT	93	68	30	3	3	197
	COL PCT	47.2	34.5	15.2	1.5	1.5	84.9
	TOT PCT	82.3	89.8	83.3	75.0	100.0	
		40.1	29.7	12.9	1.3	1.3	
COLUMN TOTAL		113	77	36	4	3	232
		48.7	32.6	15.5	1.7	1.3	100.0

RAU CHI SQUARE = 5.94079 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .6539

D22

POST	COUNT	1	2	3	4	ROW TOTAL
1.	ROW PCT	5	3	0	0	8
	COL PCT	62.5	37.5	0	0	3.4
	TOT PCT	3.1	5.4	0	0	
		2.2	1.3	0	0	
2.	ROW PCT	17	7	3	0	27
	COL PCT	63.0	25.9	11.1	0	11.6
	TOT PCT	10.7	12.5	18.6	0	
		7.3	8.3	1.3	0	
3.	ROW PCT	137	46	13	1	197
	COL PCT	69.5	23.4	6.6	.5	84.9
	TOT PCT	86.2	82.1	81.3	10.3	
		59.1	19.5	5.6	.4	
COLUMN TOTAL		159	56	16	1	232
		68.5	24.1	6.9	.4	100.0

RAW CHI SQUARE = 2.32227 WITH 6 DEGREES OF FREEDOM, SIGNIFICANCE = .8878



D23

POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL
ROW PCT	1.	2	3	3	0	0	8
COL PCT	1.	25.0	37.5	37.5	0	0	3.4
TOT PCT	1.	2.6	3.7	4.8	0	0	
	2.	.9	1.3	1.3	0	0	
	2.	9	8	7	2	1	27
	3.	33.3	29.6	25.9	7.4	3.7	11.6
	4.	11.7	9.8	11.1	50.0	16.7	
	5.	3.9	3.4	3.0	.9	.4	
	6.	66	71	53	2	5	197
	7.	33.5	36.0	26.9	1.0	2.5	84.9
	8.	85.7	86.6	84.1	50.0	83.3	
	9.	28.4	30.6	22.8	.9	2.2	
COLUMN TOTAL		77	82	63	4	6	232
		33.2	35.3	27.2	1.7	2.6	100.0

RAW CHI SQUARE = 6.89834 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .5476



D24

POST	COUNT		I		2		3		4		5		ROW TOTAL
	ROW PCT	COL PCT	1	2	3	4	5	6	7	8	9	10	
1.	50.0	3.2	4	1	2	1	1	1	1	1	1	1	8
	1.7	1.4	1	1	1	1	1	1	1	1	1	1	3.4
2.	40.7	8.7	11	7	8	1	1	1	1	1	1	1	27
	4.7	4.7	1	1	1	1	1	1	1	1	1	1	11.6
3.	11.1	11.1	1	6	22	1	1	1	1	1	1	1	197
	56.3	31.5	1	1	11.2	1	1	1	1	1	1	1	84.9
	47.8	26.7	1	1	68.8	1	1	1	1	1	1	1	110.9
	126	75	1	1	9.5	1	1	1	1	1	1	1	197
COLUMN TOTAL	54.3	30.2	1	1	32	1	1	1	1	1	1	1	232
	54.3	30.2	1	1	13.8	1	1	1	1	1	1	1	100.5

RAW CHI SQUARE = 18.91615 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0153



D25

POST	COUNT					ROW					ROW TOTAL
	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.	
1.	6	2				6	2	0	0	0	8
	75.0	25.0									3.4
	4.3	2.6									
	2.6	.9									
2.	14	8				14	8	5	0	0	27
	51.9	29.6						18.5			11.6
	10.0	13.5						33.3			
	6.0	3.4						2.2			
3.	120	66				120	66	10	1	1	197
	60.9	33.5						5.1	.5		84.9
	85.7	86.8						66.7	100.0		
	51.7	28.4						4.3	.4		
COLUMN TOTAL	140	74				140	74	15	1	1	232
	60.3	32.8						6.5	.4		110.3

RAW CHI SQUARE = 8.22876 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .2218



COUNT		D26				POST	ROW TOTAL
ROW PCT	COL PCT	1.1	2.1	3.1	4.1		
TOT PCT	TOT PCT	1.1	2.1	3.1	4.1		
1.		6	1	1	0		8
	75.0	12.5	1	12.5	0		3.4
	3.2	2.5	20.0	0	0		
	2.6	.4	.4	.4	0		
2.		24	1	1	1		27
	88.9	3.7	3.7	3.7	3.7		11.6
	12.9	2.6	20.0	100.0	0		
	10.3	.4	.4	.4	.4		
3.		156	38	3	0		197
	79.2	19.3	1.5	1.5	0		84.9
	83.9	95.3	60.0	0	0		
	67.2	16.2	1.3	1.3	0		
COLUMN TOTAL	166	43	5	5	1		232
	80.2	17.2	2.2	2.2	.4		1.0.0

RAJ CHI SQUARE = 15.99042 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = .0138



D27

POST	COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	5.	ROW TOTAL
1.	25.0	12.5	50.0	4	1	0	0	0	1	8
	11.1	14.8	6.6	0	0	0	0	0	0	3.4
	.9	.4	1.7	1	0	0	0	0	0	1.2
										.4
2.	14.8	3.7	48.1	13	1	6	1	1	3	27
	22.2	14.7	21.3	21.3	1	22.2	1	11.1	1	11.6
	1.7	.4	5.6	5.6	1	9.2	1	3.7	1	1.3
										1.3
3.	12	6	44	59	1	59	1	77	1	197
	6.1	2.5	22.3	29.9	1	29.9	1	39.1	1	84.2
	66.7	71.4	72.1	91.8	1	91.8	1	95.1	1	
	5.2	2.5	19.0	23.4	1	23.4	1	33.2	1	
COLUMN TOTAL	18	7	61	65	81	65	81	81	232	
	7.8	3.5	26.3	24.0	34.9	24.0	34.9	34.9	100.0	

ROW CHI SQUARE = 25.21095 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .0014

D28

POST	COUNT	1	2	3	4	5	ROW TOTAL
ROW PCT	COL PCT	1	2	3	4	5	
TOT PCT	TOT PCT	1	2	3	4	5	
1.		4	1	3	0	0	8
		50.0	12.5	37.5	0	0	3.4
		3.5	1.4	8.6	0	0	
		1.7	.4	1.3	0	0	
2.		13	6	5	1	2	27
		48.1	22.2	18.5	3.7	7.4	11.6
		11.4	8.1	14.3	16.7	66.7	
		5.6	2.4	2.2	.4	.9	
3.		97	67	27	5	1	197
		49.2	34.5	13.7	2.5	.5	84.9
		85.1	90.5	77.1	83.3	33.3	
		41.8	28.9	11.6	2.2	.4	
COLUMN TOTAL		114	74	35	6	3	232
		49.1	31.9	15.1	2.6	1.3	100.0

RAM CHI SQUARE = 14.33094 WITH 8 DEGREES OF FREEDOM, SIGNIFICANCE = .0735



D29

POST	COUNT	ROW PCT	COL PCT	TOT PCT	1.1	2.1	3.1	ROW TOTAL
1.	5	62.5	37.5	100	1	1	0	8
	3.5	4.6	1.3	0	1	1	0	3.4
2.	19	70.4	18.5	11.1	3	1	1	27
	13.5	7.5	1.7	1.3	1	1	1	11.6
3.	117	55	25	197	1	1	1	197
	59.4	27.5	12.7	84.9	1	1	1	84.9
	83.0	87.3	10.6	10.6	1	1	1	10.6
COL-UMN TOTAL	141	63	28	232	141	63	28	232
	60.8	27.5	12.1	100.0	60.8	27.5	12.1	100.0

RAI CHI SQUARE = 2.62335 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .6227



COUNT		D30										ROW TOTAL	
POST	ROW PCT COL PCT	1											
		1.1	2.1	3.1	4.1	5.1	6.1	7.1	8.1	9.1	10.1		
1.		4	1	2	1	1	1	1	1	1	1	8	
	50.0	12.5	25.0	25.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	3.4	
	2.5	2.2	8.3	8.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		
	1.7	.4	.9	.9	.4	.4	.4	.4	.4	.4	.4		
2.		19	7	3	2	2	2	2	2	2	2	27	
	70.4	11.1	11.1	11.1	7.4	7.4	7.4	7.4	7.4	7.4	7.4	11.6	
	12.0	6.5	12.5	12.5	6.7	6.7	6.7	6.7	6.7	6.7	6.7		
	8.2	1.3	1.3	1.3	.9	.9	.9	.9	.9	.9	.9		
3.		135	42	19	6	6	6	6	6	6	6	197	
	68.5	21.7	9.6	9.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	84.9	
	85.4	91.7	79.2	79.2	30.0	30.0	30.0	30.0	30.0	30.0	30.0		
	58.2	16.1	8.2	8.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
COLUMN TOTAL		158	46	24	3	3	3	3	3	3	3	232	
	68.1	19.8	10.3	10.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	100.0	

RAY CHI SQUARE = 21.95378 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .0050

RAW CHI SQUARE = 21.95378 WITH 4 DEGREES OF FREEDOM, SIGNIFICANCE = .0050



D31

POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL
1.	ROW PCT	5	2	1	0	0	8
	COL PCT	62.5	25.0	12.5	0	0	3.4
	TOT PCT	3.1	6.1	3.2	0	0	
		2.2	.9	.4	0	0	
2.	ROW PCT	17	1	3	1	5	27
	COL PCT	63.0	3.7	11.1	3.7	18.5	11.6
	TOT PCT	10.7	3.3	9.7	10.0	62.5	
		7.3	.4	1.3	.4	2.2	
3.	ROW PCT	137	35	27	0	3	197
	COL PCT	69.5	15.2	13.7	0	1.5	84.9
	TOT PCT	86.2	90.9	87.1	0	37.5	
		59.1	12.9	11.6	0	1.3	
COLUMN TOTAL		159	37	31	1	8	232
		68.5	14.2	13.4	.4	3.4	100.0

RAY CHI SQUARE = 30.98126 WITH 3 DEGREES OF FREEDOM, SIGNIFICANCE = .0001



D33

POST	COUNT	1.	2.	3.	4.	5.	ROW TOTAL
1.	7	1	1	1	1	1	5
2.	11	1	1	1	1	1	5
3.	96	1	1	1	1	1	5
4.	48.7	1	1	1	1	1	5
5.	84.2	1	1	1	1	1	5
6.	41.4	1	1	1	1	1	5
7.	114	1	1	1	1	1	5
8.	49.1	1	1	1	1	1	5
9.	26.7	1	1	1	1	1	5
10.	19.8	1	1	1	1	1	5
11.	46	1	1	1	1	1	5
12.	10	1	1	1	1	1	5
13.	4.3	1	1	1	1	1	5
14.	6.0	1	1	1	1	1	5
15.	6.0	1	1	1	1	1	5
16.	6.0	1	1	1	1	1	5
17.	6.0	1	1	1	1	1	5
18.	6.0	1	1	1	1	1	5
19.	6.0	1	1	1	1	1	5
20.	6.0	1	1	1	1	1	5
21.	6.0	1	1	1	1	1	5
22.	6.0	1	1	1	1	1	5
23.	6.0	1	1	1	1	1	5
24.	6.0	1	1	1	1	1	5
25.	6.0	1	1	1	1	1	5
26.	6.0	1	1	1	1	1	5
27.	6.0	1	1	1	1	1	5
28.	6.0	1	1	1	1	1	5
29.	6.0	1	1	1	1	1	5
30.	6.0	1	1	1	1	1	5
31.	6.0	1	1	1	1	1	5
32.	6.0	1	1	1	1	1	5
33.	6.0	1	1	1	1	1	5
34.	6.0	1	1	1	1	1	5
35.	6.0	1	1	1	1	1	5
36.	6.0	1	1	1	1	1	5
37.	6.0	1	1	1	1	1	5
38.	6.0	1	1	1	1	1	5
39.	6.0	1	1	1	1	1	5
40.	6.0	1	1	1	1	1	5
41.	6.0	1	1	1	1	1	5
42.	6.0	1	1	1	1	1	5
43.	6.0	1	1	1	1	1	5
44.	6.0	1	1	1	1	1	5
45.	6.0	1	1	1	1	1	5
46.	6.0	1	1	1	1	1	5
47.	6.0	1	1	1	1	1	5
48.	6.0	1	1	1	1	1	5
49.	6.0	1	1	1	1	1	5
50.	6.0	1	1	1	1	1	5
51.	6.0	1	1	1	1	1	5
52.	6.0	1	1	1	1	1	5
53.	6.0	1	1	1	1	1	5
54.	6.0	1	1	1	1	1	5
55.	6.0	1	1	1	1	1	5
56.	6.0	1	1	1	1	1	5
57.	6.0	1	1	1	1	1	5
58.	6.0	1	1	1	1	1	5
59.	6.0	1	1	1	1	1	5
60.	6.0	1	1	1	1	1	5
61.	6.0	1	1	1	1	1	5
62.	6.0	1	1	1	1	1	5
63.	6.0	1	1	1	1	1	5
64.	6.0	1	1	1	1	1	5
65.	6.0	1	1	1	1	1	5
66.	6.0	1	1	1	1	1	5
67.	6.0	1	1	1	1	1	5
68.	6.0	1	1	1	1	1	5
69.	6.0	1	1	1	1	1	5
70.	6.0	1	1	1	1	1	5
71.	6.0	1	1	1	1	1	5
72.	6.0	1	1	1	1	1	5
73.	6.0	1	1	1	1	1	5
74.	6.0	1	1	1	1	1	5
75.	6.0	1	1	1	1	1	5
76.	6.0	1	1	1	1	1	5
77.	6.0	1	1	1	1	1	5
78.	6.0	1	1	1	1	1	5
79.	6.0	1	1	1	1	1	5
80.	6.0	1	1	1	1	1	5
81.	6.0	1	1	1	1	1	5
82.	6.0	1	1	1	1	1	5
83.	6.0	1	1	1	1	1	5
84.	6.0	1	1	1	1	1	5
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86.	6.0	1	1	1	1	1	5
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88.	6.0	1	1	1	1	1	5
89.	6.0	1	1	1	1	1	5
90.	6.0	1	1	1	1	1	5
91.	6.0	1	1	1	1	1	5
92.	6.0	1	1	1	1	1	5
93.	6.0	1	1	1	1	1	5
94.	6.0	1	1	1	1	1	5
95.	6.0	1	1	1	1	1	5
96.	6.0	1	1	1	1	1	5
97.	6.0	1	1	1	1	1	5
98.	6.0	1	1	1	1	1	5
99.	6.0	1	1	1	1	1	5
100.	6.0	1	1	1	1	1	5

CHI SQUARE = 7.37555 WITH 3 DEGREES OF FREEDOM, SIGNIFICANCE = .4967



D34

POST	COUNT	ROW PCT	COL PCT	TOT PCT	1.	2.	3.	4.	ROW TOTAL
1.	37.5	62.5	0	0	1	0	1	0	8
	2.0	8.5	0	0	1	0	1	0	3.4
	1.3	2.2	0	0	1	0	1	0	
2.	20	11.1	11.1	11.1	3	1	1	1	27
	13.2	5.1	17.6	25.0	1	3.7	1	1	11.6
	8.6	1.3	1.3	.4	1	1	1	1	
3.	129	51	14	1	3	1	1	3	197
	65.5	25.5	7.1	1	1	1	1	1	84.9
	84.9	86.4	82.4	1	1	1	1	1	
	55.6	22.3	6.0	1	1	1	1	1	
COLUMN TOTAL	152	96	17	4	232				
	65.5	25.4	7.3	1.7	100.0				

RAW CHI SQUARE = 9.76049 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = .1378



D35

POST	COUNT		ROW PCT		COL PCT		TOT PCT		ROW TOTAL	
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1.	12.5	18.5	10.9	2.2	4.0	20.3	87.0	17.2	46	19.8
2.	62.3	40.7	13.1	11	68	34.5	27.6	12	26	11.6
3.	6.0	7.4	15.7	4.7	1.0	31.0	25.7	4.3	84	36.2
TOTAL	93.3	66.6	49.7	26.7	83.3	92.3	70.3	26	11.2	100.0

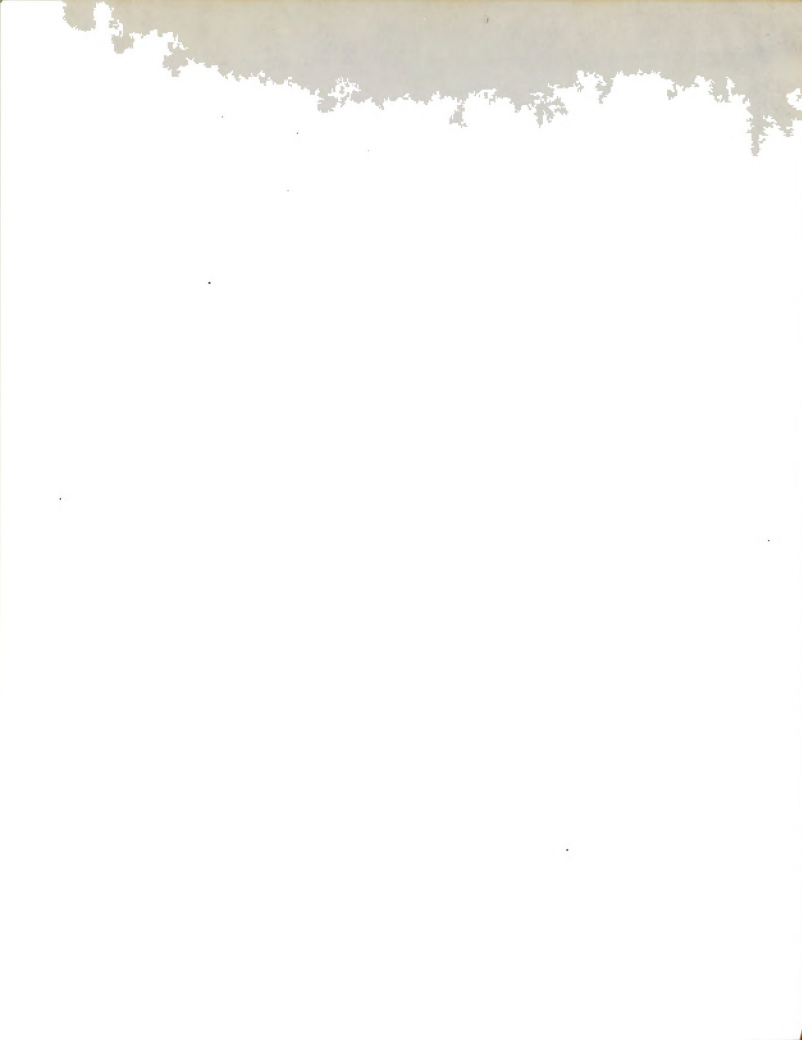
PAI CHI SQUARE = 4.24271 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = .8346











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