AN EXPLORATORY STUDY EMPLOYING THE EDUCATIONAL SCIENCE OF COGNITIVE STYLE AS A PREDICTOR OF GROUP LEADERSHIP WITHIN AN ORIENTATION PROGRAM

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
VINCENT GUSTAVE SIGREN
1973

This is to certify that the

thesis entitled

AN EXPLORATORY STUDY EMPLOYING THE EDUCATIONAL SCIENCE OF COGNITIVE STYLE AS A PREDICTOR OF GROUP LEADERSHIP WITHIN AN ORIENTATION PROGRAM

presented by

Vincent Gustave Sigren

has been accepted towards fulfillment
of the requirements for

Ph. D. degree in Education

Walter F. Johnson
Major professor

Date April 12, 1973

O-7639

ABSTRACT

AN EXPLORATORY STUDY EMPLOYING THE EDUCATIONAL SCIENCE OF COGNITIVE STYLE AS A PREDICTOR OF GROUP LEADERSHIP WITHIN AN ORIENTATION PROGRAM

By

Vincent Gustave Sigren

Purpose

This exploratory study was undertaken to determine whether the educational science of cognitive style as developed by Hill and associates[1] can be used as a predictor of group leadership and to compare the effectiveness of directive and nondirective leadership styles in "assigned" and "build" groups within a college orientation program. Thus, the focus of the study is directed to the problems created by the use of small group techniques; leader selection, style of leadership and the manner of group construction. Collective cognitive styles were determined for the thirty-two leaders by a technique described by Flanagan and comparisons were drawn between the most and least effective leaders.

The effect of leadership style and group construction was evaluated by their effect upon new student satisfaction, attendance and first-semester attrition rate.

Summary

The student sample employed in this study includes almost all the new students of the entering 1972 fall class of Olivet College. The leaders for the small group orientation program were selected from approximately 100 upperclass students, who had applied for the position of student advisor. The measures used were: (1) Leadership profile for leader selection, (2) Cognitive style testing, (3) Orientation group evaluation, (4) Leader self-evaluation, (5) Observation of leadership behavior and (6) Composite interview reaction.

Six general questions were posed in order to conduct the exploratory study effort. Where these questions generated a hypothesis, the hypothesis was tested, e.g., when there is a difference in leadership style or group construction, there will be a difference in (1) student satisfaction and (2) attendance or attrition rate. The Komolgorov-Smirnov statistical test was used to test the null hypothesis form of the operational hypothesis at alpha = .05 level of significance with the appropriate degrees of freedom.

Findings

The analysis of data supports the following findings:

1. The science of cognitive style can differentiate between the most effective and least effective leaders. Thus, cognitive style can be used as a basis for leader selection after an appropriate collective cognitive style base has been established, and also can be used to prescribe certain programs to increase the probability of effective leadership.

2. The Collective Cognitive style of the most and least effective leaders showed differences in all three sets of cognitive style. In the set, symbols and their meanings, the significant difference occurred in the "most effective leaders" group having a greater number of qualitative symbolic orientations. The cultural determinants set indicated that the family had a greater influence on meanings for most effective leaders while this element had less influence for least effective leaders. The most effective leaders group had the additional major elements of (D) Difference and (L) Appraisal in the modalities of inference set. These inference patterns

refer to the ability to distinguish differences in arriving at decisions and also to utilize all the inferences in the process of appraising a situation.

3. There was no preference expressed by new students for leadership style as measured by new student satisfaction. There was, however, a tendency to greater satisfaction in the "build" groups. The latter conclusion is based on the finding of "placing the hypothesis in doubt" i.e., $.10 \leq p \leq .05$.

4. There was a preference for nondirective leadership at a highly statistically significant level ($p = .01$) among the leaders.

5. Leadership and group construction did not affect the attrition rate.

6. There was no significant difference in attendance rates between the directive and nondirective groups. Attendance had been taken and emphasized in the directive groups and had not been visibly recorded or emphasized in the nondirective groups.

During the leader interviews, special group problems became evident which directly and indirectly influenced attendance. These problems include the

negative effect of upperclass students on new students, the unique needs of transfer, commuter and football groups and the length of the program.

Lastly, student leaders indicated that they benefited greatly from the leadership education and experience.

---

[1]Joseph E. Hill, Pamphlet on the Educational Sciences, Oakland Community College, February, 1971, p. 1.

AN EXPLORATORY STUDY EMPLOYING THE EDUCATIONAL SCIENCE OF COGNITIVE STYLE AS A PREDICTOR OF GROUP LEADERSHIP WITHIN AN ORIENTATION PROGRAM

By

Vincent Gustave Sigren

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Higher Education

1973

Dedicated

to

Linda, Eric, Krista, Beth, Lief

and

Mrs. Sigrid Forberg

ACKNOWLEDGMENTS

Sincere appreciation and acknowledgment of assistance are extended to Dr. Walter F. Johnson, chairman of the committee, whose guidance and counsel have been instrumental throughout this exploratory study and to Dr. Joseph E. Hill for his assistance and advice on the educational sciences. Their contributions have been substantial and always given in a most gracious manner.

The author is appreciative of the help and encouragement given by Dr. Wilbur B. Brookover, Dr. Vandel Johnson and Dr. Eldon Nonnamaker who along with Dr. Walter Johnson served as members of the committee.

Special thanks are extended to Mrs. Doris Harrington who assisted in data collection and typing and to the student leaders of Olivet College for their willingness to share in the adventure of behavioral patterns of leadership.

There are, of course, others who have assisted in their special ways and to them I will always be grateful.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The Problem

Periodically in society there is a need to select potentially effective leaders for certain endeavors. Once selected there is a need for the chosen leader to lead in such a manner that he or she enables the group to actualize its potential and receive optimum benefits. Each summer or fall, colleges across the nation face this problem when staffing their orientation programs. One of the orientation formats gaining wide usage utilizes small group techniques which, in turn, creates the problems of leader selection, style of leadership to be employed and the manner of group construction. The focus of this study is directed toward these problems.

Background of Study

Effective leader selection methods have often been the object of search by military, government, industrial and educational groups. This search has been hampered by a very marked difference of opinion between subscribers to the trait approach to leadership and those

who felt that the situational aspect of leadership was the determining factor in leader selection. The latest development, behavioral studies of leadership, focuses upon observed behavior of the leader within a group situation. In effect, behavioral studies of leadership are a fusion of the psychological and sociological basis put forth by "traitist" and "situationalist" advocates.

Cecil Gibb[1] in reviewing principles of leadership theory indicates that the first principle is that leadership is always relative to the situation--relative, that is, in two senses: (a) that leadership flourishes only in a problem situation, and (b) that the nature of the leadership role is determined by the goal of the group. A third principle is that leadership is a process of mutual stimulation--a social interactional phenomenon in which the attitudes, ideals and aspirations of the followers play as important a determining role as do the individuality and personality of the leader. Leadership studies reviewed by Stogdill[2] in 1948 and Mann[3] in 1959

---

[1]Cecil Gibb, "The Principles and Traits of Leadership," Journal of Abnormal Social Psychology, XLII (1947), 267-84.

[2]Ralph Stogdill, "Personal Factors Associated with Leadership," A Survey of the Literature, Journal of Psychology, XXV (1948), 35-71.

[3]R. D. Mann, "A Review of the Relationships Between Personality and Performance in Small Groups," Psychological Bulletin, LVI (1959), 241-70.

also tended to view leadership in terms of personality traits, the situation and the interaction between the two. In an early study Jennings[4] concluded from her investigation of girls in correctional institution that both isolation and leadership were found to be products of interpersonal interaction and not of attributes residing within persons. An exploratory study by John K. Hemphill[5] indicated that a view of leadership which stresses the situational nature of the leader's behavior gives a sound behavioral foundation for practical programs in the selection and training of those who are to direct group activities. If sufficient knowledge about the relation of leadership to dimensions of the group can be obtained, selection of leaders can be made with reference to the demands of the situation in which they are to lead. A study by Martin, Gross and Darley[6] produced findings which led the investigators to conclude: The paucity of differences found between leaders and nonleaders tends to negate the trait approach to leadership and suggests

---

[4]H. H. Jennings, Leadership and Isolation (New York: Longmans, Green & Co., 1943), p. 24.

[5]John Hemphill, "Situational Factors in Leadership," Educational Research Monographs, No. 32, Ohio State University, pp. v and vi.

[6]W. F. Martin, N. Gross, and J. G. Darley, "Leaders, Followers, and Isolates in Small Groups," Journal of Abnormal Social Psychology, XLVII (1952), 842.

the utilization of other frames of reference in the study of leadership phenomena.

Thomas Gordon,[7] however, points out that in their haste to drop the trait theory, some social scientists may have swung too far in the direction of emphasizing the situation. Conceivably, the situationists may be overlooking the possibility that at least some of the traits predispose their possessors to positions of leadership, or at least increase the chances of their becoming leaders in most situations. Gouldner had also indicated this position when he stated that, "by and large, the former school, characterized as 'situationlist,' have won the day. . . . Uneasy rests the head that wears the crown of science." Gouldner further suggests:

> Suppose, however, it were demonstrated that all human groups contained some elements in common, and that these could be spelled out. It should, therefore, be expected that there would be some leadership traits manifested commonly by all leaders. In short, there is no reason why leadership traits should constitute adaptions only to the diversities of groups; they should, too, involve adaptions to the similarities of groups. Thus, some leadership traits, should be unique, specific to concrete groups and situations, while some could be common to all leaders.[8]

---

[7]Thomas Gordon, Group Centered Leadership (Boston: Houghton Mifflin Co., The Riverside Press Cambridge, 1955), p. 49.

[8]A. W. Gouldner, ed., Studies in Leadership (New York: Harper Bros., 1940), p. 35.

Gordon[9] points out that this position, if sound, paves the way for an integration of the previously perceived divergent theories about leadership. Such an integration would retain the important contribution of the situationists--their emphasis on the demands of the group and needs of the members, yet it would not close the door on the possibility of discovering some traits or characteristics of importance to leaders in most group situations. This is hinted at by a survey of the use of student counselors in 128 senior colleges and universities undertaken in 1963 by William F. Brown and Vernon Zunker[10] which indicated that the five main basis for selection included previous leadership experience, dormitory directors' evaluations, college grade average, faculty members evaluation and peer acceptance ratings. Other items used less frequently included scholastic ability test scores, study habits, survey scores, screening interview and Dean's evaluation.

Educational Sciences

Although the above main basis of selection are rather general, greater specificity could be ascribed to

---

[9]Gordon, op. cit., p. 51.

[10]William F. Brown and Vernon Zunker, "Student Counselor Utilization at Four Year Institutions of Higher Learning," Journal of College Student Personnel, VII, No. 1 (January, 1966), 41-46.

them. One way would be through the utilization of the Educational Science of Cognitive Style as developed by Joseph Hill and Associates. Hill[11] indicates that the Educational Sciences were created as a conceptual framework for education (defined as the process of searching for meaning), a system within which inquiry of significance for the fundamental aspects of the applied field of education can be conducted. In this context, then the Educational Sciences provide a conceptual framework and universe of discourse for the applied field of education. The seven "sciences" are:

(1) Symbols and their meanings;

(2) Cultural determinants of the meaning of symbols;

(3) Modalities of inference;

(4) Biochemical and electrophysiological aspects of memory-concern;

(5) Cognitive style;

(6) Teaching style, administrative style and counseling style; and

(7) Systemic analysis decision-making.

The following assumptions are essential to these bodies of information:

---

[11]Hill, op. cit., p. 1.

1. Man is a social creature with a unique capacity for deriving meaning from his environment and personal experiences through the creation and use of symbols.
2. Not content with biological satisfactions alone, man continually seeks meaning.
3. Education is the process of searching for meaning.
4. Thought is different from language.

The Educational Sciences are continually evolving in both theory and refinement. The fourth science relating to "memory-concern" for example, is still in its early developmental stages.

Leadership Styles

Orientation supervisors are also faced with the problem of determining the method of leadership style to be employed by the selected leaders. Although, there are many nomenclatures to leadership, they can be divided into the general categories of directive and nondirective leadership. Directive leadership connotes basicly that the authority is leader centered while non-directive leadership connotes the authority as being group centered. A continuum illustrative of leadership would range from autocratic leadership on the directive extremity to laissez faire on the nondirective end. There are advocates of directive leadership who indicate

that new students for the most part are conditioned to directive leadership from previous societal influences, i.e., family, school, church, and need someone who can literally take charge in this new experience. Advocates of nondirective leadership point out that the student is ultimately responsible for his own destiny and is looking toward college as being an experience different from high school. This expectation usually includes increased freedom in making personal choices.

There are others who feel that institutional objectives should be the prime consideration. One might easily visualize directive leadership in the U.S. Marine Corps and nondirective leadership in an institution attempting to maximize democratic participation. Some advocates would recommend that the leader should lead in a style which best fits his or her personality, while others would recommend that, as the leadership situation changed, the leadership behavior should also change. This latter category would undoubtedly start directively and as the group acclimated itself to the new environment, become more nondirective. Regardless of the method selected, the orientation supervisor must make a choice or allow the decision to go by default. In one of the classic pioneering experiments by Lewin, White and Lippitt[12] groups of 10-year-old children were

[12]Kurt Lewin, Ralph White and Ronald Lippitt, "Patterns of Aggressive Behavior in Experimentally

subjected to autocratic, democratic and laissez faire leadership. Hostility was either greater in the autocratic groups or they evidenced extremely nonaggressive apathetic patterns and the perceived satisfactions of leadership were greatest for the groups led democratically and secondly for the laissez faire groups. Alex Bavelas[13] in an experiment with W.P.A. workers showed that it was possible to create fundamental changes in leadership philosophy and leadership techniques within three weeks. The experiment involved a change from autocratic leadership to democratic leadership and resulted in improved morale, greater productivity and increased enrollment in programs. Both the control and experimental samples were selected from previously mediocre workers. Shaw and Blum[14] using Fiedler's contingency model and evaluating leadership under different task situations found that the results of the experiment showed clearly that directive leadership is more effective than nondirective when the task is highly structured;

Created Social Climates," Journal of Social Psychology, X (1939), 271-79.

[13]Alex Bavelas, "Morale and the Training of Leaders," in Civilian Morale, ed. by G. Watson (Boston: Houghton Mifflin, 1942), pp. 143-65.

[14]Marvin E. Shaw and J. Michael Blum, "Effects of Leadership Style Upon Group Performance as a Function of Task Structure," Journal of Personality and Social Psychology, III, No. 2 (February, 1966), 241.

> that is, when there is only one solution and one way (or only a few ways) of obtaining this solution. . . . However, in tasks that require varied information and approaches, nondirective leadership is clearly more effective.

Recent literature has also emphasized the importance of both the leaders and their respective groups. The Hazen Report points out the fact that the most effective teachers are the students and that the peer group influence of friendship groups is so obvious that educators must be able to integrate it into the educational experience. Yet, the knowledge of how these friendship groups can contribute positively to the educational process is still meagre. The report goes on to state:

> We know that the trauma of leaving home for the first time and entering the relatively impersonal milieu of the college can be severe for young people. But far from attempting to facilitate the transition from home to college, we generally act so as to reinforce the freshman trauma.[15]

Arthur Chickering[16] states that a student's most important teacher is another student. Friend and reference groups filter and modulate the messages from the larger student

---

[15]The Hazen Report, The Student in Higher Education, Report of the Committee on the Student in Higher Education, The Hazen Foundation, p. 12.

[16]Arthur Chickering, Education and Identity (San Francisco: Jossey-Bass Inc., 1969), p. 253.

culture. They amplify or alternate the force of the curriculum, faculty, parental rules and institutional regulations. They can trump the best teacher's ace and stalemate the most thoughtful or agile dean. Thus, relationships with close friends and peer groups, or subcultures, are primary forces influencing student development in college. Both the Hazen Report and Chickering [17] emphasize the importance of friendship or reference groups and the role of the student as a teacher (leader). Usually, the first teacher a new student has in college is the Orientation Group (O-Group) Leader and it should follow that the leadership situation, the leader's personal traits, the style of leadership and the manner in which the new group is formed could have great impact for the new student. The manner of group formation is an extension of the directive or non-directive style of leadership. Directive leadership would be enhanced by assigned groups while nondirective leadership would allow some self-determination of the respective groups.

Olivet College Study

A pilot study to determine the effect of leadership within the Orientation Program was conducted at Olivet College in 1971. New students were randomly

[17] Ibid.

assigned according to confirmation dates to four leadership categories: directive assigned, directive build, nondirective assigned and nondirective build. Build is a term for group construction in which one student chooses a partner, they in turn choose another pair and they then proceed geometrically to the established group size. Student leaders were randomly assigned to one of the four groups and were given general instructions in directive or nondirective techniques. A weakness in the study was that although they were to use their assigned leadership style, they were not given specific behavioral actions to carry out. Members of the student orientation groups were asked to differentiate the leaders on a five-point scale (1, most directive to 5 least directive). The following mean scores were noted: Directive Assigned 2.26, Nondirective Assigned 2.33, Directive Build 2.44, Nondirective Build 3.33. The tendency toward central continuum scoring was probably due to the above noted weakness. Students, however, were able to differentiate between groups with some discrimination.

The purpose of the pilot study was to see if the leadership styles might have an effect on the first semester attrition rate and the perceived satisfaction of students within the orientation process. There was less attrition in the nondirective build category. Students indicated on a scale of 1 excellent--5 poor, that

they perceived greater satisfaction in the directive groups; directive build 2.6, directive assigned 2.8, nondirective build 3.08 and nondirective assigned 3.56. The largest number of evaluation returns, 49 of 56, were turned in by the nondirective groups. Thus, a conflicting pattern was emerging, one in which students were perceiving greater satisfaction in the directive groups and yet attrition rate and evaluation returns favored the nondirective build groups. The next logical step is to attempt to explain these tendencies through a study based upon concepts that permit greater explanation of behavior differentiation than was possible in previous efforts. The emphasis on behavior differentiation returns one to the earlier question as to whether or not effective, directive or nondirective, leadership can be predicted and thus sets the purpose of the present study.

TABLE 1.--First semester withdrawals, January 1971 (Pilot Study)

Leadership and Group Construction	Number	Percentage
Directive Assigned	8 - 80	10
Nondirective Assigned	9 - 56	16
Directive Build	7 - 56	12.5
Nondirective Build	2 - 56	3.6
Total	26 - 248	10.5

Purpose of Study

The purpose of this exploratory study is two-fold. The first purpose is to determine whether the educational science of cognitive style can be used as a predictor of group leadership. The second purpose is to compare the effectiveness of directive and nondirective leadership styles in "assigned" and "build" small groups within an orientation program measured in terms of a seven-point scale over leadership categories. The instrument used to measure "effectiveness" will be locally constructed.

Significance of the Study

The demise of the small college was predicted in the 1960's and again in the 1970's. These predictions have been viewed with alarm by educators who feel that the strength of higher education lies in its very diversity. The advent of the Community College movement, demographic changes in population growth, lessening of Vietnam pressures and the questioning of the worth of higher education has made this latter prediction especially threatening to the small colleges. Admission prospects have dwindled, costs have increased and young people are seeking avenues other than college as an alternate route to their eventual life style.

This sequence of events has made it imperative that the small college be able to minimize the cultural

shock felt by the incoming new students and the accompanying attrition rate while at the same time attempting to increase the holding power at all levels. The orientation program offers the first opportunity for the college to address itself intelligently to the problem. It is generally conceded that the impact and import of first impressions have a significance for most people people far beyond the significance of their actual occurrence.

As a result of optimum orientation programs, a greater number of students could benefit by an increased probability of success and the accompanying psychological and economic regards. The institution benefits via tangible financial benefits and intangible institutional goodwill.

The Orientation group leaders themselves are receiving an inservice education in the art of leadership. The initial selection process via cognitive mapping could point out differences to be investigated and possibly initiate individual change. By the same token, administrators may be able to distinguish distinctive cognitive styles which could lead to identification of potentially effective leadership in a variety of situations.

The data collected could have implications regarding leadership and cognitive style within the

education sciences. Information collected via interviews should be helpful for future planning by orientation directors and finally the study should serve as action research to improve an ongoing orientation program at Olivet College.

General Questions To Be Explored

The purpose of the proposed study will be realized by seeking the answers to the following questions:

1. How can the educational science of cognitive style be used in the process of predicting effective leadership?
2. How do the most effective student leaders differ from the least effective leaders?
3. Do new students show a preference for leadership style and group construction?
4. Do leaders show a preference of leadership style and group construction?
5. Does leadership and group construction methods affect the first semester attrition rate?
6. Does the use of directive or nondirective leadership affect the attendance rate of programs?

The preceding questions are not of high specificity, but the conclusions of the study will be mainly based on the responses to them.

Underlying Assumptions

For the purpose of this study the following assumptions are made:

1. Expressed opinions are felt opinions.
2. The reliability and validity of the Oakland Community Card sort are sufficient to the purposes of this study. Samples of the card sort questions are cited in the appendix, and information regarding reliability and validity is available from the Director of the Diagnostic Testing Center of Oakland Community College.
3. The determination of a leadership style for orientation purposes is worthwhile.

The conceptual framework of the educational sciences is still in a developmental state. The processes involved must be considered in that respect and careful scrutiny should be given to understanding what they can do and what they do not claim to do.

Definitions of Key Terms

Many of the key terms, which follow, are from the educational sciences, as many educators are just

now becoming aware of this relatively new concept. The following twelve headings contain definitions which are associated with the educational sciences. This is inclusive of all terms up to and including Collective Cognitive Style.

Educational Sciences[18]

A conceptual framework within which inquiry of significance for the fundamental aspects of the applied field of education can be conducted.

Cognitive Style Mapping

An individual's cognitive style is determined by the way he takes note of his total surroundings--how he seeks meaning, how he becomes better informed. Is he a listener or a reader or both? Is he concerned only with his own viewpoint or is he influenced in decision-making by his family or associates? Does he reason in categories as a mathematician does, or in relationship as social scientists do? The cognitive style map provides a limited picture of the diverse ways in which an individual acquires meaning from his environment and personal experiences based upon those discrete characteristics which can be measured.

---

[18]Hill, op. cit., pp. 1-4.

$$g = \begin{bmatrix} T' \ (AL) \ T \ (VL) \ T \ (VQ) \\ Q \ (V) \\ Q \ (T) \\ Q \ (CT) \\ Q' \ (CK) \\ Q' \ (CET) \end{bmatrix} \times \begin{bmatrix} I & F \\ A' & A' \end{bmatrix} \times \begin{bmatrix} L \end{bmatrix}$$

Figure 1.--Cognitive map[19]

Cartesian Product of Three Sets

The first set indicates a student's tendency to use certain types of symbols, his ability to handle words and numbers, qualitative symbols and qualitative codes. The second set indicates the manner in which the student tends to derive meaning from symbols whether it be in an individualistic fashion, mainly in terms of his associate's perception or on the basis of his family's ideas. The third set indicates the manner in which he reasons or his decision-making patterns. Does he think in categories or in terms of differences or synthesizes multiple relationships? The universal set is represented by the notation, g = S X E X H. S in the notation signifies symbolic orientations. E, the cultural determinants, and H, the modalities of inference.

---

[19]Abbreviation from cognitive map, Oakland Community College, 1971.

Theoretical Symbols (e.g. words and numbers)

Theoretical symbols present to the nervous system and then represent to it, something different from that which they themselves are.

Qualitative Symbols

Qualitative symbols are used to derive a variety of meanings from the environment and such personal experiences as feelings, values and insight into self. Qualitative symbols present to the awareness that which the symbol itself is to that individual.

Four Theoretical Symbols

There are two main types of theoretical symbols--auditory and visual--each of which can be divided into linguistic and quantitative elements.

T (VL) Theoretical Visual Linguistic.--Ability to find meaning from words which are seen. A major T (VL) would indicate someone who reads with a high degree of comprehension.

T (AL) Theoretical Auditory Linguistic.--Ability to acquire meaning through spoken words.

T (VQ) Theoretical Visual Quantitative.--Ability to find meaning in terms of written quantities (numerical symbols) and measurements.

T (AQ) Theoretical Auditory Quantitative.--Ability to find meaning in terms of quantities (numerical symbols and measurements) which are heard.

Five Qualitative Symbols

Q (A) Qualitative Auditory.--Ability to perceive meaning through the sense of hearing. A major (defined on page 25) in this area indicates the ability to distinguish between sounds, tone of music, dialects, etc.

Q (O) Qualitative Olfactory.--Ability to perceive meaning through the sense of smell.

Q (S) Qualitative Savory.--Ability to perceive meaning by the sense of taste.

Q (T) Qualitative Tactile.--Ability to perceive meaning by the sense of touch.

Q (V) Qualitative Visual.--Ability to perceive meaning through sight.

Q (P) Qualitative Proprioceptive.--Technically not sensory, but rather the ability to synthesize a number of symbolic mediations into "automatic" thought or programmatic action while conducting a monitoring activity. For example, when an individual upon seeing a sight of smoke immediately interprets it as evidence of fire, and experiences an interplay of many sensations including the smell of smoke, taste of smoke and

sensation of heat. Another example, synthesizing a variety of sensory and kinesthetic efforts while running and catching a ball.

Ten Qualitative Codes

Q (CEM) Qualitative Code Empathetic.--Sensitivity to the feeling of others, ability to put yourself in another person's place and see things from his point of view.

Q (CES).--Ability to enjoy the beauty of an object or an idea.

Q (CET) Qualitative Code Ethic.--Commitment to a set of values, a group of moral principles, obligations and/or duties. This does not imply morality. Both a priest and a criminal may be committed to a set of values different though they are.

Q (CH) Qualitative Code Histrionic.--Ability to deliberately exhibit a dramatic flair of emotion or temperament to produce some particular effect on other persons. This type of person would make a good actor.

Q (CK) Qualitative Code Kinesics.--Ability to communicate by nonlinguistic functions such as facial expressions and motions of the body (e.g., smiles and gestures).

Q (CKH) Qualitative Code Kinesthetic.--Motor skills, muscular coordination (e.g., involving sports or tasks where skillful command of the hands is involved).

Q (CP) Qualitative Code Proxemics.--Ability to judge the appropriate physical and social distance between oneself and another as perceived by the other person.

Q (CS) Qualitative Code Synnoetics.--Personal knowledge of oneself objectively in qualitative and theoretical forms in relation to one's environment.

Q (CT) Qualitative Code Transactional.--Ability to maintain a positive communicative interaction which significantly influences the goals of the persons involved in that interaction (e.g., salesmanship).

Q (CTM) Qualitative Code Temporal.--Ability to respond or behave according to time expectations imposed on an activity by members in the role-set associated with that activity.

Cultural Determinants

Perceptions of persons are influenced by, and in turn influence culture. A perception is considered here as an individual interpretation of a sensation. In this context a concept becomes a shared or relatively well-agreed-upon interpretation of a sensation. Cultural

influences on the meanings of symbols or the "cultural determinants" may be measured through role set theory, where a role is defined as behaviors directed toward establishing relatively stable social relationships. The roles that one has played in his social interactions with his family, associates and himself (individuality) influence symbols and their meanings. In this context, the second set of the cognitive map is composed of the following elements: F--indicates family as an influence on meanings; I--indicates "individuality" as an influence on meaning; A--indicates associates as an influence on meaning.

Modalities of Inference

The third set of the cognitive map shows the primary way one reasons in inductive and deductive fashion.

M--Magnitude.--A form of "categorical thinking" that utilizes norms categorically classified and attitudes accepted as true by the individual as the basis for acceptance or rejection of an advanced hypothesis. This is essential for the successful study of math.

D--Difference.--Suggests a tendency to think in terms of one-to-one contrasts or comparisons of selected characteristics or measurements. Artists often possess this ability.

R--Relationship.--Indicates an individual who synthesizes a multitude of relationships between two or more characteristics or measurements.

L--Appraisal.--Indicates an individual who employs all three of the above approaches giving equal weight to each. Such individuals tend to analyze, question or appraise an issue carefully before making a decision.

K.--Indicates deductive reasoning or logical proof as used in geometry.

Major

This means that the person scored at least as well as half of the total group and is symbolized by a capital letter such as "T." Thus, a T (AQ) would mean that one demonstrated average or better ability (50th percentile or above) to use numbers that one hears. This would greatly facilitate work in math for example.

Minors

This means a person is probably adequate. It is shown as a capital letter with a prime. Thus T' (VL) would mean that one scored below the upper half and above the lower quarter (25th to 49th percentile). This would imply that the person could reasonably handle an academic discipline which required the use of written words, but might need some extra help, especially, if it is a stiff course.

If one scored lower than the 25th percentile, no symbol would appear at all.

Cognitive styles do not acquire the label effective or ineffective until they are related to the specific task.

Collective Cognitive Style

A style which represents the elements held by the majority of leaders within their respective categories.

Orientation Terms

O-Group.--Orientation Group, usually comprised of eight new students and a leader.

O-Group Leader.--A student trained in leadership methodology and selected for the orientation small group program. O-Group leaders usually work in the residence halls as advisors or are alternates for residence hall positions.

Leader.--Any individual whose behavior stimulates patterning of behavior in some group. By emitting some stimuli, he facilitates group action toward a goal or goals, whether the stimuli are verbal, written or gestural.[20]

The most effective leader classification in this study includes those leaders highest in combined

---

[20]Goldner, op. cit., pp. 17-18.

satisfaction as represented by leadership satisfaction, program assistance and attendance. The least effective leaders include those lowest in combined satisfactions.

Directive Leadership.--Indicates that the leadership is centered upon the individual leading the group. This style of leadership is more authoritarian and autocratic and emphasizes the superior skills and knowledge of the leader.

Nondirective Leadership.--Indicates that the leadership is conducted in such a manner that it emphasizes group responsibility and acceptance of leadership functions. This style of leadership is more democratic and emphasizes attributes within the group.

Build Groups.--This is a method of selecting a group using the input of the group members themselves. After an initial socializing period a member selects another member whom he or she would like to work with. They, then, select another pair making four. This foursome selects another foursome, making eight. Any desired number which is geometric may be used. Composition of the group may be controlled by limiting the initial choice, i.e., you are to choose a member of the opposite sex. Once the group members are selected, they in turn select a leader from a pool of already trained leaders.

Overview of the Study

This first chapter has introduced the problems, background, purpose, significance and general questions to be explored in the study, as well as the assumptions and definitions of key terms. A review of the literature occurs in the next chapter, and the research design is covered in Chapter III. The analysis of data and findings are presented in Chapter IV, while the summary, findings, conclusions, discussion, implications and recommendations culminate the exploratory study in Chapter V.

CHAPTER II

REVIEW OF RELATED LITERATURE

This review of literature deals with three selected areas: the educational science of cognitive style, small group leadership and orientation. These three areas are considered in relation to the purpose of the study and provide background information for the posited general questions.

Educational Science of Cognitive Style

The construct of cognitive style is a vehicle which can be used to diagnose individuals and prescribe activities that provide the high probability of the student's accomplishing successfully the educational task confronting him. Hill[21] indicates that the cognitive style of an individual is a relative concept, and depends not only upon the educational level and cultural background of the individual, but also upon the symbolic condition of the task to be accomplished. In

---

[21]Joseph E. Hill, The Educational Sciences (Bloomfield Hills, Mich.: Oakland Community College Press, 1971), p. 15.

this context, the derivation of an appropriate style for an individual demands that the diagnostician analyze the student as well as the substance of the educational task to be considered, i.e., leadership. Under these circumstances, the construct of cognitive style provides a means of analyzing, interpreting and evaluating educational endeavors in a manner relatively different from those usually employed.

Hill[22] further states that the construct of cognitive style which has been developed as one of the educational sciences is different from those defined and described in the field of psychology. This construct employs a modified form of Guttman's[23] metatheory of facets as a model and the concept of cognitive style is expressed as, what mathematicians call, a Cartesian Product of Sets. In this context, according to Hill, cognitive style can be somewhat related to Guilford's[24] "dimensions of intellect." It should be noted that the fourth set, biochemical and electrophysiological aspects

---

[22] Ibid., p. 14.

[23] Louis Guttman, "An Outline of Some New Methodology for Social Research," Public Opinion Quarterly, XVIII (Winter, 1954-55), 399-400.

[24] J. P. Guilford, "Dimensions of Intellect," International Colloquium on Factor Analysis, Paris, 1955; Guilford, "The Structure of Human Intellect" (paper presented to the National Academy of Sciences, Pasadena, Calif., November, 1955), cited by Hill, op. cit., p. 14.

of memory are still in a highly speculative state of development and therefore the Cartesian product representing cognitive style is presently limited to the first three sets.

The concept of educational sciences is supported by Gordon Allport[25] when he states, "It is the duty of psychology . . . to study the person-system, meaning thereby the attitudes, traits, trends, motives and pathology of the individual--his cognitive styles, his sentiments, his individual moral nature and their interrelations." He explains further:

> . . . a traveler who moves from culture to culture, from situation to situation, is nonetheless a single person; and within him one will find the nexus the patterning of diverse experiences and membership that institute his personality.[26]

This condition appears to be well illustrated by an experiment by Gardner.[27] Fifty subjects between the ages of eighteen and thirty were tested in five tasks--an object-sorting test and a series of constancy and brightness judgments--in the expectation that their performance would reflect consistent individual differences

---

[25]Gordon Allport, Personality and Social Encounter (Boston: Beacon Press, 1960), p. 48.

[26]Ibid.

[27]Riley W. Gardner, "Cognitive Styles in Categorizing Behavior," Journal of Personality, XXII (1953), 214-33.

in equivalence ranges. All the experimental results seemed to support the hypothesis that persons are characterized by unique equivalence-range preferences in a variety of adaptive tasks. Both the quantitative and qualitative results suggest that certain control aspects of an individual's orientation toward the outer world (aspects which can, as yet, only be speculated upon) find expression in tasks demanding widely different degrees of conscious conceptualizing.

Kelly[28] addresses himself to the varying degree of conceptualization and also the qualitative codes of cognitive style as well, when he points out that since all we ever get of what is outside of us is a prognosis, what we know becomes an entirely personal matter. He adds:

> . . . I can get my stimuli from the same objects as you do, but I cannot bring the same purposes and experiences to that that you do. Therefore, they are never the same to you as they are to me. Further, it cannot be the same to me tomorrow, as it is today, because tomorrow my whole, experiencing make-up will be somewhat different.[29]

---

[28]Earl C. Kelly, Education for What Is Real (New York: Harper & Row Publishers, 1947), p. 58.

[29]Ibid.

In addition to this point, Gagne[30] points out that the influence of the culture on the human organism, once the individual genetic stock has been chosen at conception, cannot be altered very much except by extreme measures. He quickly qualifies this statement by also indicating that members of the human society which itself is responsible for the care of a developing person should have a tremendous degree of control over those events that affect his learning. He cites experience as man's greatest teacher which means that the events the developing individual lives through--in his home, his geographical environment, in school and in his various social environments--will determine what he learns and therefore to a large extent what kind of person he becomes. In the educational science of cognitive style, it is these cultural determinants which have an effect on meaning in the mediation of theoretical and qualitative symbols.

The third set of cognitive style deals with modalities of inference and shows the primary way one reasons in inductive and deductive fashion. Bloom[31]

---

[30]Robert M. Gagne, The Conditions of Learning (2nd ed.; New York: Holt, Rinehart and Winston, Inc., 1970), p. 2.

[31]Benjamin Bloom, ed., Taxonomy of Educational Objectives (New York: David McKay Company, Inc., 1956), p. 38.

illustrates the importance of this area when he states that when the student encounters a new problem, he will select an appropriate technique for attacking it and will bring to bear the necessary information, both facts and principles. The activity has been labeled "critical thinking" by some, "reflective thinking" by Dewey and others, and "problem-solving" by still others. In the taxonomy Bloom has used the term "intellectual abilities and skills." Within the educational sciences, these taxonomies could be explained partially under the rubric modalities of inference.

The works of Guttman and Guilford, and the thinking of Allport, Gagne, Gardner, Kelley and Bloom are helpful in understanding the educational science of cognitive style. Thus, the "emperical mapping" of individual cognitive styles is a process of determining elements of "style" which can be observed in the behaviors of an individual and classified in the respective sets comprising cognitive style on a "makes sense," or "does not make sense" basis. Studies relating to the educational sciences have focused on collective cognitive styles, effects of cognitive style on teacher effectiveness, grading, learning methods and prediction. Researchers have been especially interested in the effects of matching or mismatching of cognitive styles of members of a group with that of the leader of the group, i.e., teacher, administrator or counselor.

A study was made by Hoogasian[32] to determine whether a "collective cognitive" style could be established for groups of students receiving different final letter grades in two college freshman level English courses taught at a community college. The findings indicated that collective cognitive styles could be identified and related to various letter grades by students. However, the data did not serve as definitive predictors of final grades; rather the collective cognitive styles were useful as predictors of success or failure in the course under study.

Schroeder,[33] in a related study, found that students having cognitive styles "similar" to that of the instructor rated the teacher to be high in effectiveness at a level of statistical significance ($p = .05$). These same students tended to be the ones who received the highest grades. The predominant elements found for the "similar" groups were T(VL) and T(AL) in the set of theoretical symbols; I and (I-A') in the cultural determinants set and L in the modalities of inference set.

---

[32]Vaughn Hoogasian, "An Examination of Cognitive Style Profiles as Indicators of Performance Associated with a Selected Discipline" (unpublished Ph.D. dissertation, Wayne State University, 1970), pp. 59-85.

[33]Arlen V. Schroeder, "A Study of the Relationship Between Student and Teacher Cognitive Styles and Student Derived Teacher Evaluations" (unpublished Ph.D. dissertation, Wayne State University, 1969), p. 8.

Similarly, a study by Ort[34] examined the discrete elements and totality of elements in cognitive styles of students studying foreign language in a junior high school and of others studying at the high school level. The discrete characteristics influential in predicting relationship to teacher and success in a foreign language, i.e., only "parts" and elements of the three set cartesian product, were found to be not significant. The analysis of variance findings, however, indicated a relationship and prediction capability of all the variables (teacher, cognitive style set, like unlike relationships) to student success as measured by grades. The fact that "unlike" matches on isolated elements seems to have been more associated with success indicated a need for the total cartesian product of three sets and that all the profiles had to be treated in place of isolated characteristics. This finding is compatible to the need of viewing the whole child and sheds some doubt on the practice of "treating" students within the educational environment based on limited data (i.e., reading level).

When the cognitive style and preferred teaching style of the students is matched with the cognitive style

---

[34]Barbara Ort, "An Examination of Relationships Between the Measurable Cognitive Characteristics of a French I Teacher and the Student Success in that Course" (unpublished Ph.D. dissertation, Michigan State University, 1971), pp. 62-71.

and teaching style of the faculty member, Lange[35] found that the matched students significantly perceive their instructor more positively than do the unmatched students. They also achieve higher mean scores in final course grades. The student leaders within the small discussion groups were required to have the following major elements:

$$g = \begin{bmatrix} T\ (VL) \\ Q\ (CET) \\ Q\ (CT) \end{bmatrix} \times \begin{bmatrix} A \end{bmatrix} \times \begin{bmatrix} M \\ D \\ R \end{bmatrix} \quad \text{Match with small groups}$$

Figure 2.--Major elements of student leaders

In a study of administrators, Zussman[36] found that it was possible to identify a set of cognitive styles, administrative styles and collective cognitive and administrative styles for the group to which the individual administrator belonged. From his data, he was able to identify a significant difference between the administrative style of the members of the one sample group (community college) and the members of the other sample group (public school administrators).

---

[35]Chrystal Marie Lange, "A Study of the Effects on Learning of Matching the Cognitive Styles of Students and Instructors in Nursing Education" (unpublished Ph.D. dissertation, Michigan State University, 1972), pp. 117-18.

[36]Steven Zussman, Cognitive Style and Administrative Style (Bloomfield Hills, Mich.: Oakland Community College Press, 1971), p. 6.

DeLoach[37] suggests that the phenomenon of cognitive dissonance may have a significant role in the evaluation of teaching due to differences of the evaluator and the teacher being evaluated in terms of cognitive style and teaching style. This study seriously questions the method of single supervisor evaluations used in education.

A study which may have implications for small group leadership was conducted by Wyett.[38] He analyzed cognitive style and teaching styles of teachers with the express purpose of examining the possibilities of using the educational sciences as tools of analysis and prediction. This was an effort to determine cognitive styles and teaching situations which could produce a different approach to assessing particular aspects of teacher preparation and teacher effectiveness in selected teaching situations. According to this early study in the educational sciences, teachers were found to have a predominant style, when they employ a relatively fixed style of teaching. This "style" could be either authoritative or permissive. Teachers using the cognitive

---

[37]Joseph F. DeLoach, Cognitive Style and Cognitive Dissonance (Bloomfield Hills, Mich.: Oakland Community College Press, 1970), p. 13.

[38]Jerry L. Wyett, "A Pilot Study to Analyze Cognitive Style with Reference to Selected Strata of the Defined Educational Sciences" (unpublished Ph.D. dissertation, Wayne State University, 1967), p. 101.

style of the students as a departing point and adjusting him to his mode of teaching were found to have an adjustive style. The teacher in the process of instruction who employed the style which appears to be optimum for the students' cognitive style is considered to have a flexible teaching style. Wyett found that those persons in the study who were placed in teaching situations which were not in keeping with their style, did not perform as well as those who were appropriately matched. Thus, the teaching style of an individual is apparently very strongly influenced by his cognitive style.

The leadership function of teachers, administrators and counselors, thus becomes a focal point of study. In Chapter I emphasis was given to the fact that the first teacher of a new college student is likely to be another student. The next section of related literature directs itself to the leadership aspects facing the student leaders.

Small Group Leadership

The number of theories seem boundless. The main psychological, sociological and behavioral divisions were distinguished in Chapter I, but they were not meant to be all inclusive. This can be illustrated by reference to an article by John F. Wharton.

> There is alive today an ingenious thinker named Francis J. Mott. He believes that the universal design of creation is that shown by the atom; a central nucleus with particles whirling about it. He then hypothesizes that there are two classes of people: the so-to-speak nucleus people and the periphery people; the former should be the leaders--it is part of nature's design.[39]

While the divergent theories are many, the search continues for a framework which will be useful for predicting, selecting and analyzing leadership. The educational sciences, potentially, may be of assistance because it considers within its conceptual framework the individual traits, the situation and the style of the leader. Disagreement abounds regarding trait theory, but Gouldner[40] points out that even a field-social psychologist such as J. F. Brown, oriented to the role of the situation and its structure has implied that there are certain traits found among all leaders. He feels that it would be absurd to deny that two factors of semi-biological nature are important in leadership: intelligence and psychosexual appeal. Of these, probably the most important is intelligence. The emphasis on intelligence is corroborated by Jenkins[41] when he found in a

---

[39]John F. Wharton, "The Making of Leaders," Saturday Review, April 13, 1968, p. 26.

[40]Gouldner, op. cit., pp. 25-30.

[41]W. O. Jenkins, "Review of Leadership Studies with Particular Reference to Military Problems," Psychological Bulletin, 1947, pp. 44, 54-79.

review of leadership studies that the leaders showed some superiority over the members of their groups, in at least one of the wide variety of abilities. The common factor that appeared is that leaders in a particular field tend to possess superior general or technical competence or knowledge in that area. Gibbs[42] also states that individuals chosen by a selection authority, as having leadership capacity, have superior intelligence and are superior in other mental abilities. They are also better educated and have greater similar leadership experience in the area for which the choice is made and have a relatively higher socioeconomic status. They also have such personality traits as sociability, self-confidence and adjustibility which contributes to the ease of their social-interactional behavior.

A cautionary thought is expressed by Gouldner[43] when he warns of the possibility that while there are some traits common to all leaders, it is not to be interpreted that all leaders are the "same" everywhere. He feels that there seems to be no a priori reason that leaders, like people in general, should not be both similar and different from others. The findings of

---

[42]Gibbs, op. cit., p. 283.

[43]Gouldner, op. cit., p. 35.

Bird[44] also indicate diversity. He analyzed trait leadership studies and found that only 5 per cent of the traits mentioned were common to four or more investigations.

A survey by Stogill[45] categorizes the factors associated with Leadership as follows:

(1) Capacity (intelligence, alertness, verbal facility, originality, judgment);

(2) Achievement (scholarship, knowledge, athletic, accomplishment);

(3) Responsibility (dependability, initiative, persistence, aggressiveness, confidence, desire to excel);

(4) Participation (activity, sociability, cooperation, adaptability, humor);

(5) Status (socio-economic position, popularity);

(6) Situation (mental level, status, skills, needs and interests of followers, objectives to be achieved, etc.).

---

[44]Charles Bird, Social Psychology (New York: D. Appleton Century Co., 1940), p. 379.

[45]Ralph M. Stogill, "Personal Factors Associated with Leadership: A Survey of the Literature," Journal of Psychology, XXV (1948), 35-71.

The evidence of this study suggests that leadership is a relation that exists between persons in a social situation, and that persons who are leaders in one situation may not necessarily be leaders in other situations. This does not mean, however, that leadership is entirely haphazard and unpredictable. Rather, the very studies which provide the strongest arguments for the situational nature of leadership also supply the strongest evidence indicating that leadership patterns of behavior are relatively stable.

In an earlier study of 112 criminal leaders, non-commissioned officers, student leaders and their respective followers, Cowley[46] found that six traits were common to all three groups that were studied. These traits are: self-confidence, as measured by a rating scale; motor impulsion, as measured by the Downey test; finality of judgment as measured by the Moore-Rice questionnaire; speed of decision, as measured by the Aggressiveness Mottoes; speed of decision as measured by the Moore-Rice questionnaire and speed of decision as measured by the Tact-Motto test.

---

[46]W. H. Cowley, "The Traits of Face to Face Leaders," Journal of Abnormal and Social Psychology, XXVI (1931-32), 26, 304-13.

McGrath[47] in a summary of small group literature, which applies equally to research in leadership found that there is very little understanding of small group phenomena. He feels this is due to a lack of systematic research and that this situation will continue even though the production of research continues without abatement. An attempt to reduce this confusion has been made by the introduction of conceptual models such as proposed by Fiedler.[48] His theory postulates two major styles of leadership, one of which is task-oriented, and the other, oriented toward attaining a position of prominence and toward achieving good interpersonal relations. He showed that in terms of promoting group performance, the data indicate that the task-oriented type of leadership style is more effective in group situations which are either favorable to the leader or which are unfavorable to the leader. He also pointed out that the relationship-oriented leadership style is more effective in situations which are intermediate in favorableness. Favorableness of the situation is defined as the degree to which the situation enables the leader to exert influence over his

---

[47]J. E. McGrath, A Summary of Small Group Research Studies, HSR/TN-62/3-GN, cited in Fred E. Fiedler (Arlington, Va.: Human Sciences Research, Inc., 1962), p. 4.

[48]Fred E. Fiedler, A Theory of Leader Effectiveness (New York: McGraw-Hill Book Co., 1967), p. 13.

group. In an experiment conducted by Shaw and Blum[49] to test the generality of this hypothesis, groups of five persons attempted three tasks under either directive or nondirective leadership. The leadership behavior was manipulated by the instructor. The tasks were selected to vary along the solution multiplicity dimension, thereby presumed to reflect different levels of favorability for the leader. The results indicated that the directive leader was more effective than the nondirective leader only when the group-task situation was highly favorable for the leader, thus only partially supporting the hypothesis. Regardless of the implication for the contingency model, the results show clearly that directive leadership is more effective than the nondirective type, when the task is highly structured; that is, when there is only one solution and one way (or only a few ways) of obtaining the solution. Nondirective leadership is clearly more effective on tasks that require varied information and approaches. This could have definite impact for orientation program structure depending upon their formats. One further study by Eagley[50] brings

---

[49]Marvin E. Shaw and J. Michael Blum, "Effects of Leadership Style Upon Group Performance as a Function of Task Structure," Journal of Personality and Social Psychology, III, No. 2 (February, 1966), 238-41.

[50]Alice H. Eagley, "Leadership Style and Role Differentiation as Determinants of Group Effectiveness," Journal of Personality, XXXVIII, 509.

together the concern with role differentiation by Bale and Slater and the emphasis of Fielder on personality as determinant of group effectiveness. This study explored the relationship between the leadership style of both task and social-emotional leader and group effectiveness. The findings confirm generally, the ability of the leadership style variable to account for variance in group effectiveness and indicates that when role differentiation occurs, the relationships between the leadership style of the task leader and group effectiveness are less important than those involving the social-emotional specialist. This study indicates that group effectiveness is a function of neither role only nor of personality only, but of the interaction of role and personality.

The successful leader, according to Tannenbaum,[51] and associates, is one who is keenly aware of those forces which are most relevant to his behavior at any given time. He accurately understands himself, the individuals and group that he is dealing with as well as the social environment. Secondly, the successful leader is one who is able to behave appropriately in the light of these perceptions. If directiveness is in order, he is able to direct; if considerable participative freedom is

---

[51] R. Tannenbaum, I. Weschler, and F. Massorik, Leadership and Organization (New York: McGraw Hill, 1961), pp. 78-79.

called for, he is able to provide such freedom. This view is supported by Argyris[52] when commenting on evidence which seemingly supports the concepts of autonomy as espoused by both Skinnerians and non-Skinnerians: He commented that perhaps these two technologies can work equally well because the subjects--human beings--may be quite flexible regarding the route they will take to better themselves. His experience implies that people who are ready to be helped (i.e., are ready to take initiative for their growth make two demands: the first is that the expert [leader] genuinely care for them and thus not knowingly lead them to harm and the second is that the route must have some probability of success). This implies competence on the part of the expert to lead them through the unknown territory. This is substantiated by a study of Peltz.[53] The objective of the study was to determine how measures obtained on supervisors are related to the workers they supervised in a large electric utility. The findings indicate that the leader will be accepted by the members to the extent that he helps them to achieve their goals. An elaboration of

---

[52]Chris Argyris, "Essay Review," Harvard Educational Review, XLI, No. 4 (1971), 550-67.

[53]P. C. Peltz, "Leadership Within an Hierarchal Organization," Journal of Social Issues, VII, 49-55.

this point is made by Hemphill[54] when he poses the question, "Could greater progress toward this goal be made if training were oriented toward recognition of the differing leadership requirements of differing situations?" He goes on to state that these problems might be less baffling if we knew how to appraise the characteristics of a leadership situation in a manner that would permit one to predict the required qualities of the successful man in the situation. The plan of his study was to develop means of describing group situations in terms of the degree of specific characteristics they possess. The characteristics held in common were regarded as group dimensions and they were examined in terms of their utility of understanding what differing situations require of a successful leader with regards to behavior. The results of the study lend encouragement for the idea that a means may be found to estimate within predictable limits the requirements of leadership in a situation of known general characteristics. This posture is accented by Gouldner[55] as he points out that in employing the leadership corps as the unit of study, it was possible that a minimum "core" of personality characteristics of

---

[54]John K. Hemphill, Situational Factors in Leadership (Ohio State University Studies, Bureau of Educational Research, Ohio State University, 1949), p. 45.

[55]Gouldner, op. cit., p. 45.

leadership could be isolated. The "core" noted for each leader would not necessarily contain psychological characteristics found in each leader, but would rather be a composite of some of their personality features. This lends credence to the idea of employing a collective cognitive style within the educational science for use in leadership study. Gouldner[56] goes on to state that once determined and validated, such group personality cores may be useful for leadership selection. Eaton[57] has expressed the belief that no test can hope to fully measure the unique qualities of each personality--the unknown and perhaps unknowable factors which provide an exception to any social regularity. However, he further states that leadership tests which could separate the extreme cases--those very likely to succeed or fail as leaders--would be an important scientific achievement. This idea is consistent with work by Flanagan[58] as he utilized the upper and lower 27 per cent of the distribution items and found the results to be satisfactory

---

[56] Ibid.

[57] Joseph W. Eaton, "Is Scientific Leadership Selection Possible?" in Studies in Leadership, ed. by Alvin Gouldner (New York: Harper & Bros. Publishers, 1950), p. 642.

[58] John C. Flanagan, "General Considerations in the Selection of Test Items and a Short Method of Estimating the Product-Moment from the Data at the Tail of the Distribution," Journal of Education Psychology, XXX (1939), 674-80.

approximations to the biserial coefficients. The chart utilized was based on Kelly's findings that upper and lower groups containing 27 per cent of cases were optimum for certain related estimations. Two other studies give credence to an attempt to predict leadership. Carter[59] used a battery of tests for selection purposes for foremen and assistant foremen in two mental fabricating plants. Ratings by fellow supervisors were used as criteria of supervisory ability. The results indicate that at least in some instances supervisory ability can be measured fairly accurately by psychological tests by selecting the best predictors from a relatively large number of likely indices (twenty-nine in this study). The second study by Dugger[60] utilized the grade point average and the autonomy and social extroversion scales of the Omnibus Personality Inventory to discriminate between leaders and nonleaders and found the results to be significant ($p = .001$).

---

[59]Gerald C. Carter, "Measurement of Supervisory Ability," Journal of Applied Psychology, XXXVI (1952), 393-95.

[60]June Armistead Dugger, "A Study of Measurable Personal Factors of Leaders and Non-Leaders Among University Freshman Women," Dissertation Abstracts International, XXX, Nos. 4-6 (1969) (The Florida State University, 1969), p. 1,817A.

Williams and Leavitt[61] view with caution the implications of the works reviewed by Jenkins and also the previous works cited. They state that for practical purposes, leadership predictors will have to be tailor-made and not just taken from a grab-bag of accumulated aptitude tests. In a follow-up study of junior officers in the Marine Corps, most of whom became combat platoon leaders, they found that a sociometric group opinion was a more valid predictor both of success in Officer Candidate School and of combat performance than several objective tests.

An additional facet of leadership has to be considered when one recognizes the import of living in a democratic society during an age of unprecedented rapidity of change. The problem is posed by Kelley when he states:

> There seems to be ample evidence that the autocratic nature of our society is unsatisfactory to the people concerned, both those giving orders and those receiving them. . . . For education, it must mean a new set of patterns, built from cooperative, rather than the punitive and competitive point of view. It must mean the accomplishment of purposes through cognizance of and adjustment to the purposes of others.[62]

---

[61]Stanley B. Williams and Harold Leavitt, "Group Opinion as a Predictor of Military Leadership," Journal of Consulting Psychology, No. 11 (1947), 283-91.

[62]Kelley, op. cit., pp. 103, 112.

This view is supported by Lewin when he states that on the whole there is ample proof that the differences in behavior in autocratic, democratic and laissez-faire situations are not brought about by individual differences. He explains:

> There have been few experiences for me as expressive as seeing the expression in children's faces change during the first day of autocracy. The friendly, open and cooperative group, full of life, became within a short half hour a rather apathetic-looking gathering without initiative. The change from autocracy to democracy seemed to take somewhat more time than from democracy to autocracy. Autocracy is imposed upon the individual. Democracy he has to learn.[63]

Supporting the observations of Kelley and Lewin is a study by Snodowsky[64] which focused on the extent to which communication structure modifies the effects of task and leadership variables on group performance and satisfaction. He found that members of the democratic-led groups were more satisfied than members of authoritarian-led groups. As a result of his findings, he recommends that democratic leadership behavior be exercised for both simple and complex problem-solving situations.

---

[63]Kurt Lewin, Study on Leadership, ed. by Alvin A. Gouldner (New York: Harper, 1950), pp. 416-17.

[64]Alvin M. Snodowsky, "Group Effectiveness as a Function of Communication Network, Task Complexity and Leadership Type," Dissertation Abstracts International, 1969 (The City University of New York), p. 2,155A.

The element of change is emphasized by DeCecco[65] in a survey made in the spring of 1969 of 670 junior and senior high school students in the New York and Philadelphia area which indicated that decision-making was overwhelmingly the first choice in describing the type of conflict engaged in or witnessed by the reporting student. He feels that adults fail to consider the activities with which students are concerned. These involve increased interest in discussing and participating in decisions affecting their conditions; political discussions and participations; the exchange, writing and distribution of their articles; the informality of dress and manners that enable them to concentrate on more productive matters; the ability to engage in and resolve conflict and more strikingly, the help they give each other in lieu of institutional help. He attributes this myopic view of adults to the fact that they are imprisoned by their memories and the classroom. A constructive view offered by Brameld[66] which would capitalize on these interests presents the basic purpose of education as teaching people how to become their own masters in practice as well as theory--in short to take control of

---

[65]John P. DeCecco, Regeneration of the School: Decision Making in a Democracy (New York: Holt, Rinehart and Winston, Inc., 1972), pp. 229-35.

[66]Theodore Brameld, Education as Power (New York: Holt, Rinehart and Winston, Inc., 1965), p. 8.

the local, national and international community, rather than to let the community take control of them. Seemingly, the question that arises then is whether the apparent change in high school student bodies, who will shortly be in college, should be a factor in orientation programming and also whether the orientation situation calls for a specific type of leadership. The third portion of the related research devotes itself to these questions.

Small Group Orientation

Orientation is defined as a process of finding out the actual conditions and putting one's self in the right relationship to them. Within an orientation program itself, Mueller[67] indicates that two of the main objectives are persuading freshmen as soon as possible to assume responsibility for themselves and for the institution to find out as much as possible about the freshmen themselves. The specific areas of concern as seen by Hoffman and Plutchuk[68] include (1) the place of education in life; (2) increased self-knowledge; (3) increased social awareness; (4) increased self-confidence;

---

[67]Kate H. Mueller, Student Personnel Work in Higher Education (Boston: Houghton Mifflin Company, 1961), p. 224.

[68]Randall Hoffman and Robert Plutchuck, Small Group Discussion in Orientation and Teaching (New York: G. P. Putnam's, 1959), p. xi.

(5) the improvement of academic skills; (6) development of leadership skills and (7) the awareness of college facilities.

Orientation programs are a relatively new innovation and were in part motivated by the high attrition rates which occur during the initial year of college. The diversity of programs is illustrated in a study by Kronovet,[69] which encompassed 1,378 colleges where orientation programs are available. Her findings showed that 31.2 per cent offer programs that last one week before classes get underway; 14.6 per cent extend one semester to the full academic year; less than 1 per cent offer summer programs; 17.77 per cent cover less than one week which includes a freshman camp program; 19.8 per cent combine meetings before classes begin with regular meetings spread over the freshman year and 1 per cent run programs through the first week of classes for one or two days. Attendance was required for these programs at the majority of these institutions (78.3%) and only 9.7 per cent actually indicated that attendance was optional.

---

[69]Esther Kronovet, "Current Practices in Freshman Orientation," Improving College and University Teaching, XVII (May, 1969), 204-05.

Fitzgerald and Busch[70] suggest that perhaps the most essential element of the creative orientation program is the completion of an institutional self-study upon which are based the current institutional reflections and the projections of the future. They indicated that in the final analysis, the institution must decide upon its focus for new student orientation and they also advocate the use of faculty members while shifting away from student planning and reducing the involvement of administrative staff. The trend toward a more academic or intellectual approach through the use of faculty is evidenced by Grier[71] as he notes that practitioners seem to agree that if the intellectual approach can be handled through small groups, it has the value of getting at the individual through the vehicle of the small group. He cites a recent experience with seventy-eight faculty members leading small group discussions on classroom procedures which brought enthusiastic participation by both faculty and students. The importance of this participation is acknowledged by Sanford as he states:

---

[70]Laurine E. Fitzgerald and Shirley A. Busch, "Orientation Programs: Foundation and Framework," College and University Business, XXXVIII (April, 1963), 270-75.

[71]Daniel J. Grier, "Orientation--Tradition or Reality?" Journal of National Association of Student Personnel Administration, XXX, No. 3 (January, 1966), 37-41.

> . . . if the faculty is ever going to have close and influential relationships with students, these relationships must be established at the beginning of the Freshman year. The main purpose of the Freshman year in any college should be to win the freshman to the intellectual life. In most cases this cannot be done except by the faculty.[72]

Looking at college from the student's viewpoint, Goldsen[73] notes that when they are pinned down, students hold three fairly clear "philosophies" above all others: an academic philosophy, that a basic education and the appreciation of ideas are important in and of themselves; a vocational philosophy, that vocational training and skills are necessary for effectiveness in one's career; and an interpersonal philosophy, that the ability to get along with different people contributes to a satisfying life. The small group orientation format lends itself especially well to the first and third "philosophies." Tautfest's[74] study of orientation interests, as reported by prospective students, through mailed questionnaires revealed an emphasis on academic preparation and program

---

[72]Nevitt Sanford, "Recent Research in the American College Student," in Orientation to College Learning, ed. by Nicholas C. Brown (Washington, D.C.: American Council in Education, 1961), p. 25.

[73]Rose K. Goldsen, "Recent Research in the American College Student," in Orientation to College Learning, ed. by Nicholas Brown (Washington, D.C.: American Council of Education, 1961), p. 27.

[74]Patricia B. Tautfest, "An Evaluation Technique for Orientation Programs," Journal of College Student Personnel, III (October, 1961), 25-32.

planning, becoming familiar with the campus, handling finances in college, student organizations and intramural sports. A later study by Ivey[75] found that efforts to increase the academic and intellectual emphasis of the orientation programs did not appear to win recognition by freshman students. The three-year study showed that freshmen responded best to social or informational activities. A series of meetings with residence hall counselors appeared to be the best received feature of each Freshman week program.

Regardless of emphasis, the utilization of small groups seem to be increasing in orientation programs. The study of Hoffman and Plutchuck[76] of orientation courses at other colleges as well as their own experiences have convinced them that the purposes of orientation are best realized through a small group approach, with teachers employing a group-centered method of leadership. Ninety-eight per cent of the students evaluated in a study by Pappas[77] agreed or strongly agreed that small group orientation sessions

---

[75]Allen E. Ivey, "A Three Year Evaluation of a College Freshman Week Program," Journal of College Student Personnel, V, No. 2 (December, 1963), 113-18.

[76]Hoffman and Plutchuck, op. cit., p. xi.

[77]John G. Pappas, "Student Reaction to a Small-Group Orientation Approach," College and University, XLIII, 84-87.

(eight-twelve students) are more desirable than orientation meetings where large numbers of students are in attendance. It is suggested in a similar study by Miller and Ivey[78] that because of the consistent favorable response of students to small group meetings and individual sessions, regardless of the type of program, that perhaps shortened programs emphasizing small groups would be the ideal precollege orientation.

As previously stated, college authorities institute orientation programs in an effort to decrease attrition. Research in this area, however, is generally not promising. One positive finding is reported by Smith.[79] Freshman students who met voluntarily in small group sessions throughout their first semester had only an 8 per cent withdrawal rate at the end of the semester, as compared to a 24 per cent rate for a control group and 31 per cent for experimental group members who attended fewer than three meetings. However, Kopecek[80]

---

[78]C. Dean Miller and Allen E. Ivey, "Structure Response to Three Types of Orientation Programs," Personnel and Guidance Journal, XLV (June, 1967), 1,025-29.

[79]Smith, "Higher Education Programs," 1963, cited in Earl Kolle, Vincent Harris, and Carolyn Dragger, "Orientation Programs," Review of Educational Research, XXXVI, No. 2 (April, 1966), 243.

[80]Robert J. Kopecek, "Freshman Orientation Programs: A Comparison," Journal of College Student Personnel, VIII, No. 5 (September, 1967), 51-52.

found that voluntary withdrawal and academic dismissal are not affected by orientation programs. This study utilized three different approaches to orientation: small-group nondirective and nonauthoritarian, authority centered and mailed material. The program covered 180 randomly selected students at a resident two-year technical college in rural New York State. A similar result was obtained by Rothman and Leonard[81] in a community college. During the summer of 1965 they constructed a "good" semester-long orientation program to meet the needs as indicated by a previous questionnaire. Three small group meetings and one large presentation meeting were held each month. Twelve sessions were held and groups were randomly selected and assigned. The results of the study showed that control and experimental groups did not differ significantly in grade point average during either the first or second semester. Similarly, there was no difference found between the two groups in attrition rate for either semester. In his study focusing on academics rather than attrition, Pappas[82] found that those students who completed either the "directive-factual" approach or the "small-group" approach of

[81]Leslie K. Rothman and Donald G. Leonard, "Effectiveness of Freshman Orientation," Journal of College Student Personnel, VIII, No. 5 (September, 1967), 300-04.

[82]Pappas, op. cit., pp. 84-87.

additional college orientation, demonstrated significantly higher academic achievement than those who participated only in the pre-college program. There was no significant difference, however, between the "factual" and "small-group" approach.

The role of the student as leader, adviser or counselor, has increased as the size of Freshman classes have become larger each year and as orientation has become impersonal in its approach. Grier supports this increased emphasis as he comments on the accepted technique of using upper-class students as counselors:

> If the emphasis is to be on life adjustment, the use of upperclassmen makes some sense, since they are closer to the new student than the faculty or administrator. However, we must have considerable reservation about how well in-service training programs for student counselors really work. At best, they may be more useful to the student counselor than to the new student.[83]

Brown and Zunker[84] in a study cited previously found that the main basis for selection of student counselors included previous leadership experience, dormitory directors' evaluation, college grade average, faculty members' evaluation and peer acceptance ratings. They also found that 84 per cent of the respondents felt that students made an effective and positive contribution to

---

[83]Grier, op. cit., pp. 37-41.

[84]Brown and Zunker, op. cit., pp. 41-46.

the total guidance program of their institutions. The information on small-group orientation is best summed up by Patty,[85] who observes that there is very little written on the training of freshman advisors, and for that matter, on the use of experienced graduate students as freshman advisors. His concern voices the concern that there is absolutely nothing in the literature on the evaluation of existing orientation programs at individual institutions and on research that explores whether or not a particular institution is compatible with an individual freshman. This statement along with the presented evidence of conflicting findings re-emphasizes the need for additional research on small-group orientation programming.

Summary

This chapter has presented research on the related areas of the Educational Science of Cognitive Style, Small Group Leadership and Small Group Orientation. It has emphasized the concepts and supporting theory upon which the educational science of cognitive style is based, presented the controversy regarding leadership theory and provided both research and recommendations for small-group orientation programs. In the next

---

[85]Austin H. Patty, "Freshman Orientation: A Growing Concern," Improving College and University Teaching, XIV (Summer, 1966), 184-88.

chapter, the design of the study is considered in respect to the general questions raised in Chapter I and also the related research presented in Chapter II.

CHAPTER III

DESIGN OF STUDY

Source of Data

This study involved the new students of the entering 1972 Fall class of Olivet College and the upper-class orientation leaders.

Olivet College is located in Olivet, a city of approximately 1,000 inhabitants in south central Michigan, thirty-five miles southwest of Lansing, the state's capital. The College is a four-year co-educational liberal arts institution of approximately 800 students. The faculty student ratio at the time of the study was 13:1. Students represented thirty states and fifteen foreign countries. The northeastern United States was especially well represented.

Olivet was founded in 1844 and is a member of the American Council of Education, Association of American Colleges, Association of Independent Colleges and Universities of Michigan, Council for Higher Education of the United Church of Christ, Michigan Academy of Science, Arts and letters, Michigan Association of

Colleges and Universities, Michigan Colleges Foundation and Michigan Intercollegiate Athletic Association. It is accredited by the North Central Association of Colleges and Secondary Schools. The Teacher Preparation Program is approved by both the Michigan State Department of Education and the National Council for the Accreditation of Teacher Education. Olivet has a relationship to the Congregational Church and the United Church of Christ, although its organization is that of an independent, private college directed by a Board of Trustees. Olivet College has a faculty of approximately sixty-five members of which approximately 30 per cent possess their doctorate.

Samples Employed by Study

The population of Students for the study include all new students of the fall term, 1972, who had been confirmed for admission prior to the deadline date for college entry. This universe includes freshman, transfer, commuter and residential students. The only category not included would be that of students returning to Olivet after a period of absence. The original figure for group division purposes of the defined population was 256 students. However, as a number of students had confirmed at several colleges, the actual sample size for the study was somewhat smaller.

Students forming the sample for the study were randomly assigned to their respective groups. After the deadline date, late entering students were arbitrarily assigned to disjunct groups.

The sample of students included in the measures of the study involving most effective and least effective groupings comprised 50 per cent, i.e. 128 students, of the above group. The sample group showed characteristics highly similar to those of the defined population, i.e. of the total class.

Characteristics of the 1972 incoming class[86] based on percents include the following:

(1) 52.5 per cent are male and 47.5 per cent are female;

(2) 92 per cent are included in 18-19-year-old bracket;

(3) 95.6 per cent are White/Caucasian;

(4) 50 per cent of their fathers had attended college;

(5) 40 per cent of their mothers had attended college;

(6) 64.4 per cent came from small or moderate sized towns;

---

[86] American Council of Education, Summary of Data on Entering Students, Olivet College, Fall, 1972.

(7) 78 per cent graduated from classes of less than 500 students;

(8) 57 per cent are Protestant and 13 per cent are Catholic;

(9) 53.8 per cent ranked at the top quarter of their high school class;

(10) 96 per cent attended public schools;

(11) 40 per cent came from distances of over 100 miles;

(12) 30 per cent expressed interest in fine arts as a major, 11 per cent in education, 11 per cent in social sciences;

(13) 58 per cent classify themselves as middle of the road in current political preference;

(14) 22 per cent are undecided as to possible career occupations.

Sample of Leaders

The Leaders for the small group orientation program were selected from approximately 100 upperclass students, who had applied for the position of student adviser. Each spring semester, an attempt is made to encourage as many students to apply for the position of adviser as possible. The 100 applicants represent approximately 25 per cent of the upperclass students

living on campus and include students who represent the academic, vocational and social aspects of the campus. There are approximately twenty-seven actual positions available, but all candidates completing the program are rank ordered to provide for both a selection and an alternate selection list. Additional orientation group leaders are selected from the alternate list.

During the evaluation process, potential advisers received a comprehensive generalized leadership training program. This included a job description review, participatory decision-making in regulations, human relationship training, drug information sessions, small group work on case problems and individual work on potential residence hall situations. The program lasted for ten weeks and served to act as a screening device for those applicants who were not highly motivated. The final evaluation was accomplished through the use of a leadership profile (see Appendix B) which includes ratings on age-class-experience, academic standing, attendance, advisors' ratings, interview and testing. After selection, leaders were randomly assigned to the various categories of leadership for the exploratory study and were given specific behavioral instructions in their category of leadership.

Thirty-two advisers and alternates were selected for orientation leadership positions (sixteen male and

sixteen female). Data on sixteen or 50 per cent of the student leaders was utilized in the portion of the study dealing with most effective and least effective leadership.

Representativeness of Sample of the Defined Populations

With the exception of a few students, the entire population comprises the sample for data collected for certain of the exploratory general questions and is therefore highly representative of the population. Those students who enrolled after the deadline date and necessarily missed the majority of orientation programming were not included in the data.

The sample used for the most and least effective leaders involved approximately 50 per cent of the leaders and students. Thus, this sample also is highly representative of their respective defined populations.

Adequacy of Sample Size

The study was designed to examine the data at the exploratory study level of consideration. Therefore, small sample theory could be employed. The number, $n \leq 30$, of leaders is adequate under the terms of small sample theory and for exploratory study efforts.

Data Collection

The instrumentalities and the procedures used for the collection of the data employed in the study are as follows:

Instrumentalities

The instruments used to collect the data in the study were (1) Leadership profile scores; (2) Cognitive Style testing; (3) Orientation group evaluation; (4) Leader self-evaluation; (5) Observation of leadership behavior and (6) Composite interview reaction sheet.

The Leadership Profile provided a composite score for leadership potential and was utilized for selection of both advisers and alternates. The basis for measurement included age-class-experience, academic standing, attendance, advisor ratings, interview and testing. All measurements were converted to a four-point scale. In the age-class-experience category, applications were reviewed and two of the four points were ascribed to previous counseling experience and two points were ascribed to current chronological age and class standing. The academic standing refers to the cumulative grade point average to date. Attendance at selection meetings was converted to the four-point scale. In the adviser ratings, a list of all applicants was submitted to the then current student advisers. They were asked to simply check yes or no or no knowledge as to whether a candidate has good potential for an advisership. A ratio was established and conversion made to the four-point scale. The interviews were conducted by the head residents and student personnel staff members. These interviews are

conducted in groups of six and ratings made on a four-point scale in reference to leadership potential. The testing utilizes actual campus experiences and answers were scored on a best, next best and worst basis. The composite score reflects the profile and was based on a four-point scale. Items are weighted equally, however, marked deviations were noted and in case of similar scores the adviser rating scale was used for differentiation. The Leadership profile with some periodic revisions has been utilized for seven years with success (see Appendix B).

The Cognitive Style Testing Battery produced information that resulted in a computerized print-out of a cognitive style map for an individual. Thus the process of "mapping" a student's cognitive style not only depends on testing results, but on the translation of these results into elements found in the "map."

This instrument employed is in effect a card sort composed at Oakland Community College covering the three sets of cognitive style: symbols and their meanings, cultural determinants and modalities of inference. A total of 216 responses were secured to gather data from which the cognitive style map of three sets of information was produced. (The card sort was administered at Olivet College and the results sent to Oakland Community College for scoring and processing.) Cognitive

style testing utilizing the regular battery, and also the card sort techniques, have been given to approximately 35,000 students at Oakland Community College. Reliability and validity indices on these instruments and procedures are available from the Diagnostic Testing Center of the College. Sample questions are illustrated in the Appendix F.

The Orientation Group Evaluation was a locally constructed instrument designed to glean information regarding leader behavior and student reactions to the leadership behaviors and orientation programming for this study. It was especially designed to provide a cross check on specific leader behavior and to provide data which were not available in the pilot study made in 1971. Students were also asked to indicate their satisfaction regarding leadership, group construction, program effectiveness and attendance on a seven-point continuum (see Appendix C).

The Leader Self-evaluation was also constructed locally. It served the purpose of specifying the various behaviors desired in the leadership patterns as a leadership training device and also recorded the leader's observations regarding himself and his satisfaction with his leadership assignments, the method of group construction and his evaluation of the program's assistance to new students. In addition, the leader

reported the type of leadership role and group construction which he felt would be best for his or herself (see Appendix D).

The Observation of Leadership Behavior form paralleled the two previously mentioned forms and served as a cross check also for verification of leader behavior. Its use was confined to the professional observers. The Student Counselor, Associate Dean of Students and Dean of Students served as the observors. Each evaluated the groups independently and on more than one occasion. Specific behaviors were recorded, as well as a designation made of a leadership rating based on a seven-point continuum (see Appendix E).

The Composite Interview Reaction Sheet was constructed after completion of thirty-minute individual interviews with leaders. They were conducted upon the conclusion of the orientation program. Comments and suggestions that had some frequency were categorized and resubmitted to the student leaders. They were asked to agree or disagree with the written statements and to make any further suggestions desired. The Composite interview reaction is a variation of the technique of "brainstorming." The purpose of the interviews was to gain information regarding leader feelings and perceptions. The leader self-evaluation was used as an initiating tool for the interview and the student leaders

were encouraged to make evaluative judgments, as well as suggestions. A special emphasis was made to determine preference for leadership style and group construction. A complete list of the responses is available in Appendix G.

The locally constructed instruments were designed to complement each other and to arrive at data specifically for this study. The procedures in implementing these instruments follow in the next section.

Procedures

The main procedures of data collection employed in the study are as follows:

1. Applications were taken and processed for leader positions. This included campus-wide notification of the coming selection process and securing nominations from the current advisory staff. The nominees were then invited to join the selection process. Every attempt was made to secure the largest possible number of applicants.

2. A general inservice training program was conducted for all candidates. This included case studies, human relations training, specialty topics, job description review and sample testing. The program was conducted by the student personnel staff members under the direction of the Dean of

Students. Make-up sessions were available for students who missed meetings due to the schedule conflicts or illness.

3. Upon completion of the inservice training program, students were assigned to adviser or alternate positions by their composite profile score. The professional staff had the opportunity to change any rankings so desired. For the second successive year, no rankings were changed. Assignments were completed prior to the end of the college year (June, 1972).

4. During the fall inservice training program, the student leaders were informed of the design of the leadership study to be conducted within the orientation program. They were appraised of the inconclusive results of the previous study and the importance of carrying out the behavioral characteristics of their particular leadership category. Part of this appraisal included a legitimizing of each of the methods to be used in the leadership study. They then took part in the random selection of leadership assignments.

5. Specific behavioral training of directive and nondirective leaders was given separately. The leadership behaviors listed on the leader

evaluation sheet were emphasized and examples and demonstrations used where necessary.

6. New students were randomly assigned to their respective groups. The build groups were assigned to a general pool while the assigned groups were assigned to either a directive assigned or nondirective assigned group at random. The general pool was necessary to allow for the "building" sequence which was to follow. Students receiving assigned groups received an orientation letter to report to the gymnasium while students in the build classification received notice to report to the Collegiate Center. Upon arrival at their respective assignments the students were encouraged to socialize with each other via a socializing technique based on the occult sciences. This allowed for the arrival of late comers and the usual last-minute mix-ups. Parents at this same time were being hosted by administrative officers at a program in the Mott Auditorium. After the socializing period of approximately thirty minutes, the students in the gym were brought together and briefly welcomed. They were then told that the orientation program was a requirement for all new students and turned over to

their respective student leader. For the duration of the program, attendance was emphasized in the directive groups and no further mention was made in the nondirective groups.

The groups assigned to the Collegiate Center followed the same socializing format. However, after being brought together and the same attendance announcement made, they participated in "building" their own groups and selecting their own leaders. Both groups followed the same program format which consisted of both small and large group activities.

7. Initiation of the Orientation Program began with a concentrated three and one-half days (morning, afternoon, evening) sessions and once each week for seven weeks thereafter to coincide with the mid-term marking period.

8. Observations were made independently of the leadership styles by three professional observers (Counselor, Associate Dean of Students and Dean of Students). The Counselor and the Associate Dean of Students were new to the campus.

9. Leaders were cognitively mapped using the Oakland Community College Card Sort and the computer facilities of Oakland Community College.

10. During the seventh week of the program, the Orientation Group Evaluation sheet was administered.

11. During the eighth week, the leader self-evaluation sheet was administered and the interview conducted.

12. During the ninth week, the Composite interview sheet was constructed and distributed to the student leaders. The responses were then collected and tabulated.

Summary of Design of Study

This is an exploratory small sample study searching for indications and implications of the posited general questions. One of the main purposes is to determine whether the educational science of cognitive style can indicate differences in most effective and least effective leadership and if so, what might these differences be. Thus, collective cognitive style for most effective and least effective leaders will be ascertained by surveying each of the cognitive maps of the individual leaders. Predominant elements within maps served to form a collective cognitive style and these styles were then compared for differentiating elements. The next step was to pose some possible alternatives in the use of cognitive style in predicting effectiveness of leadership or probable style of leadership.

The effect of directive and nondirective leadership, as well as method of group constructions is of importance and this was measured by the Komolgorov-Smirnov statistical technique.

	Directive Assigned	Non-Directive Assigned	Directive Build	Non-Directive Build
$ME_{S_{n1}}(x)$				
$LE_{S_{n2}}(x)$				
Maximum Deviation				
$S_{n1}(x) - S_{n2}(x)$				

Figure 3.--Design model for measuring effectiveness of leaders

Likewise, the leadership style and method of group instruction will be compared with the attrition rate and the significance of required attendance investigated.

The responses to the Composite Interviews were tabled and a general summary statement composed from the findings. This should be of assistance for the continuing research on the Olivet Orientation Program.

The design of the study is such that it is to provide information for intelligent adjustments to an ongoing program and to provide some investigative

possibilities as well as lend support to existing theory. A model of the statistical technique used and the findings follow in the next chapter.

CHAPTER IV

ANALYSIS OF DATA AND FINDINGS

Analysis of Data

The data yielded by the study were those of (1) the descriptive, qualitative type statements; (2) the nominal scale of measurement; (3) the ordinal scale of measurement; and (4) the interval scale of measurement. Descriptive-qualitative data are of primary importance in answering the first two general questions of the study. The remaining data which deal with ratings of leaders' personal preferences, attrition rate and attendance were distributed over the nominal, ordinal and interval scales of measurement. Cognizant that the majority of the data collected is of the nominal and ordinal level of measurement, nonparametric tests have been employed.

Analytic Techniques Employed

The statistical measurements utilized in this study were primarily directed at the most effective and least effective leaders. This is a modified technique

consistent with the report of Flanagan[87] concerning satisfactory approximation to the biserial coefficient through the use of upper and lower groups. The chart utilized in the procedure was based on the findings of Kelly[88] that upper and lower groups containing 27 per cent of the cases were optimum for certain related estimations.

Individual cognitive maps were surveyed to determine a collective cognitive style for both the most effective and least effective leader-categories. After determining collective cognitive maps for both categories, they in turn were surveyed for differences which might attribute to leader effectiveness. Testing the styles of leadership in terms of most and least effectiveness was accomplished by the use of the Komolgorov-Smirnov two-sample test, which compares the distribution of relative frequencies over the stated categories. It is a test of whether two independent samples have been drawn from the same population (or from populations with the same distribution). This process is described by Siegel:

---

[87] Flanagan, op. cit., pp. 674-80.

[88] T. L. Kelly, "The Selection of Upper and Lower Groups for the Validation of Test Items," Journal of Educational Psychology, XXX (1939), 17-24.

> . . . The two-tailed test is sensitive to any kind of difference in the distributions from which the two samples were drawn--difference in location (central tendency), in dispersion, in skewness, etc. . . . If the two samples have in fact been drawn from the same population distribution, then the cumulative distributions of both samples may be expected to be fairly close to each other inasmuch as they both should show only random deviations from the population distribution. . . . When compared to the t-test, the Komolgorov-Smirnov test has high power efficiency (about 96%) for small samples. . . . seems to be more powerful in all cases than either the X^2 test or the median test.[89]

The difference in the one sample test is that it compares the distribution with the theoretical relative distribution rather than that of another sample. The following table illustrates the method used in the study:

TABLE 2.--Two sample Komolgorov-Smirnov statistical techniques

	Directive Assigned	Directive Build	Non-Directive Assigned	Non-Directive Build
Most Effective $S_{81}(x)$	$\frac{1}{8}$	$\frac{2}{8}$	$\frac{7}{8}$	$\frac{8}{8}$
Least Effective $S_{82}(x)$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{6}{8}$	$\frac{8}{8}$
Maximum Deviation $S_{n1}(x)-S_{n2}(x)$	$\frac{4}{8}$	$\frac{3}{8}$	$\frac{1}{8}$	$\frac{0}{0}$

[89] Sidney Siegel, Nonparametric Statistics for Behavioral Sciences (New York: McGraw Hill Book Co., 1956), pp. 127-36.

Testable Hypothesis

The statistical inference process employed was as follows:

1. Null Hypothesis: $H_o:RF_1 = RF_2$ i.e.; in statement form--the expected relative frequencies of the most effective leaders n_1 are equal to the expected relative frequencies of the least effective leaders n_2 for the k categories covering the range of leadership styles. The statistical alternative hypothesis is $H_1:RF_1 \neq RF_2$; i.e. the expected relative frequencies of the most effective leaders is not equal to the expected relative frequencies of the least effective leaders.

2. Statistical Test: Two small independent samples of equal sizes ($n_1=n_2=8$) are to be compared on a categorical basis, hence the Komolgorov-Smirnov two-sample test is an appropriate one.

3. Level of Significance: (α) The level of significance is .05.

4. Sampling Distribution: A complete table of critical values is listed by Siegel.[90]

5. Critical Region: Since the null hypothesis H_o and the statistical alternative hypothesis H_1 do not

---

[90] Ibid., p. 278.

predict direction, a two-tailed test is used. The null hypothesis is rejected if the value for K_D for the maximum deviation is of such magnitude (equal to or larger than the appropriate K_D in the table) that the probability associated with its occurrence, if H_o is supposedly true, is equal to or greater than the critical values found for D if $\alpha = .05$.

6. Compute the value of the statistic: The value of K_D with which this form of the Komolgorov-Smirnov test is concerned is the numerator of the maximum deviation D which appears in the bottom row of each individual table (in the sample form it is 4 from $D = \frac{4}{8}$.

7. Decision concerning H_o: Since the critical value of K_D for $n_1 = n_2 = 8$ under the two-tailed test employed at the $\alpha = .05$ level of significance is: $K_D = 6$ and the value of K_D yielded by the sample data is $K_D = 4$, the null hypothesis cannot be rejected.

Additional data deemed to have import for the study have been reported in descriptive forms and in tables of nominative data which are presented in the response to the general questions of the study. The following findings are listed in order of the posed questions.

Findings

The findings regarding the first two general questions are presented together as they are related to each other. These questions are:

1. How can the educational science of cognitive style be used in the process of predicting effective leadership?

2. How do the most effective leaders differ from the least effective leaders?

The collective cognitive style for the most effective leaders constructed from the eight most effective leaders using a modified technique described by Flanagan[91] is as follows:

$$g = \begin{bmatrix} T' \ (AL) \\ Q \ (V) \\ Q \ (T) \\ Q \ (S) \\ Q \ (O) \\ Q \ (CT) \\ Q \ (CS) \\ Q \ (CP) \\ Q \ (CK) \\ Q \ (CH) \\ Q \ (CET) \\ Q \ (CES) \\ Q \ (CEM) \\ Q \ (A) \end{bmatrix} \times \begin{bmatrix} F \\ A' \\ I' \end{bmatrix} \times \begin{bmatrix} R & D & L \\ M' & M' & \end{bmatrix}$$

Figure 4.--Most effective leader collective cognitive style

---

[91]Flanagan, op. cit., pp. 674-80.

The collective cognitive style for the least effective leaders selected in the same fashion is as follows:

$$g = \begin{bmatrix} T'(AL)\ T'(AQ)\ T(VL)\ T'(VQ) \\ Q\ (T) \\ Q\ (S) \\ Q\ (O) \\ Q\ (CT) \\ Q\ (CS) \\ Q\ (CK) \\ Q\ (CET) \\ Q\ (CES) \\ Q\ (CEM) \\ Q\ (CKH) \end{bmatrix} X \begin{bmatrix} \\ I \\ F' \\ A' \\ \\ \\ \\ \\ \\ \\ \end{bmatrix} X \begin{bmatrix} \\ R \\ D' \\ M' \\ \\ \\ \\ \\ \\ \\ \end{bmatrix}$$

Figure 5.--Least effective leader collective cognitive style

The differences within the first set of symbols and their meanings occur in both the theoretical and qualitative symbols.

The least effective leaders have either majors or minors in all four theoretical symbols while the most effective category has a minor in T' AL.

The most effective category has the following qualitative symbols not evidenced in the least effective category--Q (V), Q (CP), Q (CH), Q (A). The least effective category has a Q (CKH) not evidenced in the most effective category.

In the second set of cultural determinants the difference lies in the I rotating from the major position

in the least effective group to the weakest minor position in the most effective group.

$$\begin{bmatrix} I \\ F' \\ A' \end{bmatrix} \qquad \begin{bmatrix} F \\ A' \\ I' \end{bmatrix}$$

Least Effective Most Effective

In the third set of modalities of inferences the difference lies in the fact that the most effective group has a major D and an L while the least effective group has a minor D.

Thus, the differences are noted below with the least effective group distinguished by underlining:

$$\begin{bmatrix} \underline{T' \ (AQ)} & \underline{T \ (VL)} & \underline{T' \ (VQ)} \\ \underline{Q \ (V)} & & \\ Q \ (CP) & & \\ Q \ (CH) & & \\ Q \ (A) & \underline{(QCKH)} & \end{bmatrix} \times \begin{bmatrix} F & \underline{I} \\ A' & \underline{F'} \\ I' & \underline{A'} \end{bmatrix} \times \begin{bmatrix} D & L \\ \underline{D'} & \end{bmatrix}$$

Figure 6.--Differences in cognitive styles of most effective and least effective leaders

In addition to the comparison of collective cognitive styles the most effective and least effective leader samples were compared over the randomly assigned categories of leadership.

The following statistical results are presented using the Komolgorov-Smirnov two sample statistical test.

In each of the tables the null hypothesis states that there is no difference between most effective and least effective leader categories.

TABLE 3.--Differences in leadership style and group construction of most effective and least effective leaders

	Directive Assigned	Directive Build	Non-Directive Assigned	Non-Directive Build
Most Effective $S_{8_1}(x)$	$\frac{2}{8}$	$\frac{3}{8}$	$\frac{6}{8}$	$\frac{8}{8}$
Least Effective $S_{8_2}(x)$	$\frac{3}{8}$	$\frac{4}{8}$	$\frac{5}{8}$	$\frac{8}{8}$
Maximum Deviation $S_{n1}(x)-S_{n2}(x)$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{0}{8}$

The numerator of the largest deviation is 1. The Table of Critical Values of K_D in the Komolgorov-Smirnov two-sample test indicates a value of 6 is necessary at the α level of .05. Therefore, the null hypothesis cannot be rejected.

With regard to the differences between male and female leadership, the following table is presented:

TABLE 4.--Differences between most effective and least effective leaders according to sex

	Male	Female
Most Effective $S_{8_1}(x)$	$\frac{7}{8}$	$\frac{8}{8}$
Least Effective $S_{8_2}(x)$	$\frac{0}{8}$	$\frac{8}{8}$
Maximum Deviation $S_{n1}(x)-S_{n2}(x)$	$\frac{7^*}{8}$	$\frac{0}{8}$

The numerator of the largest deviation is 7. The Table of Critical Values indicates that this value is highly significant at the α level of .01 in a two-tailed test. The null hypothesis is rejected.

The third question asks: Do new students show a preference for leadership style and group construction?

Leadership style was rated on a seven-point continuum with seven, very satisfactory; five, satisfactory; three, somewhat satisfactory; one, unsatisfactory. The sample of thirty-two groups, sixteen in each category represent all of the new students in the study.

The following table presents the mean satisfaction of groups by leadership style:

TABLE 5.--Difference in preference of new students for leadership style

Leadership Style	New Student Satisfaction				
	6.5	6.0	5.5	5.0	4.5
Non-Directive S_{16_1} (X)	$\frac{1}{16}$	$\frac{6}{16}$	$\frac{10}{16}$	$\frac{14}{16}$	$\frac{16}{16}$
Directive S_{16_2} (X)	$\frac{2}{16}$	$\frac{6}{16}$	$\frac{11}{16}$	$\frac{15}{16}$	$\frac{16}{16}$
Maximum Deviation S_{n1} (X) S_{n2} (X)	$\frac{1}{16}$	$\frac{0}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{0}{16}$

The numerator of the largest fraction in the Maximum Deviation column is 1 and the Table of Critical Values calls for a value of 8 when n = 16, α = .05, two-tailed. Thus, the H_o: $S_{n1} = S_{n2}$ <u>cannot</u> be rejected.

Group construction satisfaction was rated on a similar continuum of seven, very satisfactory to one, unsatisfactory and also includes all groups. The table shown on the following page presents the mean satisfaction of groups with regard to group construction.

The numerator of the largest fraction in the Maximum Deviation column is four and the Table of Critical Values establishes a value of eight when n = 16, α = .05 two-tailed. Thus, the H_o: $S_{n1} = S_{n2}$ <u>cannot</u> be rejected.

<u>The fourth question is: Do leaders show a preference of leadership style and group construction?</u>

TABLE 6.--Differences in preference of new students for group construction

Group Construction	New Student Satisfaction							
	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5
Assigned S_{16_1} (X)	$\frac{2}{16}$	$\frac{5}{16}$	$\frac{10}{16}$	$\frac{14}{16}$	$\frac{14}{16}$	$\frac{15}{16}$	$\frac{15}{16}$	$\frac{15}{16}$
Build S_{16_2} (X)	$\frac{4}{16}$	$\frac{9}{16}$	$\frac{13}{16}$	$\frac{15}{16}$	$\frac{16}{16}$	$\frac{16}{16}$	$\frac{16}{16}$	$\frac{16}{16}$
Maximum Deviation S_{n1} (X) - S_{n2} (X)	$\frac{2}{16}$	$\frac{4}{16}$	$\frac{3}{16}$	$\frac{1}{16}$	$\frac{2}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{0}{16}$

The responses indicate the preference of leaders for leadership and group construction according to their randomly selected categories. The findings are presented in Table 7 and include all leaders.

Using the Komolgorov-Smirnov one-sample test, the following statistic (Table 8) is computed for leadership preference, N = 32.

The Maximum Deviation is 9/32 which is .281. Table E[92] shows that for N = 32, D $\geq$ .281 has an associated probability under H_o of p = .01. Thus, the H_o *is* rejected at the α = .01 level.

Using the one-sample test, the following statistic (Table 9) is computed for Group Construction Preference, N = 29.

---

[92]Siegel, *op. cit.*, p. 251.

TABLE 7.--Frequency distribution of leadership style and group construction preference of leaders

	Leadership Preference		Group Construction Preference		
	Directive Leader-ship	Non-Directive Leadership	Assigned	Build	No Prefer-ence
Directive Assigned	3	5	3	3	2
Non-Directive Assigned	2	6	4	3	1
Directive Build	3	5	0	8	
Non-Directive Build	1	7	1	7	
Totals	9	23	8	21	3

TABLE 8.--Leadership style preference of leaders

	Directive Leadership	Non-Directive Leadership
	9	23
F_o (X)	$\frac{18}{32}$	$\frac{32}{32}$
S_{32} (X)	$\frac{9}{32}$	$\frac{32}{32}$
$F_o(X) - S_{32}(X)$	$\frac{9}{32}^*$	$\frac{0}{32}$

TABLE 9.--Leader-group construction preference of leaders

	Assigned	Build
	8	21
F_o (X)	$\frac{14.5}{29}$	$\frac{14.5}{29}$
S_{29} (X)	$\frac{8}{29}$	$\frac{29}{29}$
$F_o(X) - S_{29}(X)$	$\frac{6.5}{29}$	$\frac{0}{29}$

The Maximum Deviation is 6.5/29 which is .234. Table E shows that for N = 29, $\alpha = .05$, the value called for is circa .24. At the $\alpha = .05$ level the H_o cannot be rejected although it could be rejected at the $\alpha = .10$ level. This situation of $.10 \leq p \leq .05$ places the hypothesis in doubt.

Question Number Five: Does leadership and group construction methods affect the first semester attrition rate?

The Komolgorov-Smirnov one-sample test is used to measure the attrition rate over the categories of leadership and group construction. The reported numbers are indicated in the following table.

TABLE 10.--Differences between leadership and group construction relative to first semester attrition

	Leadership and Group Construction			
	Directive Assigned	Non-Directive Assigned	Directive Build	Non-Directive Build
Attrition Frequency	8	5	4	7
Frequency Under H_o	$\frac{6}{24}$	$\frac{12}{24}$	$\frac{18}{24}$	$\frac{24}{24}$
S_{24} (X)	$\frac{8}{24}$	$\frac{13}{24}$	$\frac{17}{24}$	$\frac{24}{24}$
Maximum Deviation $F_o(X) - S_{24}(X)$	$\frac{2}{24}$	$\frac{1}{24}$	$\frac{1}{24}$	$\frac{0}{24}$

The Table of Critical Values[93] of D in the Komolgonov-Smirnov one-sample test establishes the values for N = 24, α = .05 to be circa .27. The computed value of the Maximum Deviation is 2/24 or .085. Thus the H_o: DB = NDB = DB = NDB cannot be rejected.

Question Number six: Does the use of directive or nondirective leadership affect the attendance rate of programs?

Attendance was rated on a seven-point continuum with seven representing all orientation meetings; five,

[93] Ibid., p. 251.

most; three, some and one, none or very few. The table reveals attendance within the categories of leadership style and group construction.

TABLE 11.--Frequency distribution of attendance within categories of leadership style and group construction

	Group Attendance Means							
	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.0
Directive Assigned	0	2	1	1	2	2	0	0
Directive Build	1	0	2	4	1	0	0	0
Non-Directive Assigned	0	1	3	3	1	0	0	0
Non-Directive Build	0	0	3	1	2	1	0	1

A comparison of directive leadership in which attendance was visible and emphasized with nondirective leadership in which attendance was not emphasized and not visible is reflected in Table 12.

The numerator of the largest fraction in the Maximum Deviation is two. The Table of Critical Values calls for a value of eight for $N = 16$ $\alpha = .05$. Thus, the null hypothesis cannot be rejected.

Complete results of the composite interview responses are included in the appendix. In Table 13 are listed those responses relating directly to the study.

TABLE 12.--Differences between directive and nondirective leadership in terms of attendance

	Group Attendance Means							
	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.0
Directive $S_{n16}(X)_1$	$\frac{1}{16}$	$\frac{3}{16}$	$\frac{6}{16}$	$\frac{11}{16}$	$\frac{14}{16}$	$\frac{16}{16}$	$\frac{16}{16}$	$\frac{16}{16}$
Non-Directive $S_{n16}(X)_2$	$\frac{0}{16}$	$\frac{1}{16}$	$\frac{7}{16}$	$\frac{11}{16}$	$\frac{14}{16}$	$\frac{15}{16}$	$\frac{15}{16}$	$\frac{16}{16}$
Maximum Deviation $S_{n1}(X) - S_{n2}(X)$	$\frac{1}{16}$	$\frac{2}{16}$	$\frac{1}{16}$	$\frac{0}{16}$	$\frac{0}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{0}{16}$

TABLE 13.--Composite interview results

Statements	Responses	
	Agree	Disagree
1. The Leader should size up the group needs and go according to their needs always looking for the group to take over.	30	2
2. Start Directive in leadership and end Non-Directive (Situational Leadership)	25	3
3. Directive is best as that's what they are used to.	5	25
4. Since students are eventually going to be on their own, they should have the experience of non-directive groups.	20	13
5. I was successful in going according to the specific behavioral objectives.	18	11
6. I feel the inservice training given prior to the O-Group experience was adequate.	24	7
Group Construction		
7. Students would prefer to be members of build groups.	27	10
8. I feel eight plus a leader is an ideal size group.	25	6
9. There is less confusion in assigning the groups.	23	9
10. There should be one football player, one commuter, and one transfer student in each group.	5	26
11. Equalize the sexes in the groups.	25	6
12. Have interaction between O-Groups.	32	0

TABLE 13.--Continued

	Statements	Responses	
		Agree	Disagree
	Attendance		
13.	Stress the Attendance--more reluctance, but they enjoy it when they are there.	16	11
14.	Required attendance is the only way to go.	5	22
15.	Students have a feeling, "unless it goes on my record, it's unimportant."	14	17
16.	"Optional and good" is the secret to programming.	22	5
	Length of Program		
17.	There is value in having the program go until midterm.	17	14
18.	The program is too long. Have it twice a week for three weeks.	18	13
19.	Meet fewer times but have some substance to the meeting.	22	10
20.	The meetings should be bi-weekly, alternating with the Convocation Program.	19	11
21.	Set up a special night and time for O-Group meeting to eliminate hassle of deciding the meeting dates.	22	9
22.	Start the Orientation Program early for those who come early.	13	17
23.	Initially have four days rather than three--spread out activities with more free time.	26	4
24.	Go three or four weeks and then have a "reunion" at midterm.	25	7
25.	Get the program to end on a climactic note, rather than downhill.	31	1

TABLE 13.--Continued

	Statements	Responses	
		Agree	Disagree
	Special Group Problems		
26.	Coming early by Football and Music students affects their attitude negatively toward the Program.	21	9
27.	Upperclassmen affect new students' attitudes toward orientation negatively.	25	7
28.	There should be a separate program for commuters.	26	6
29.	There should be separate programs for music students.	13	19
30.	There should be separate programs for football players.	20	11
31.	Separating groups out will destroy a sense of community.	12	19
32.	There should be separate programs for transfer students.	30	1
33.	Orient transfer students to a different school rather than to college.	25	7
34.	Program should be shorter for transfer students.	27	4
	Leader Benefits		
35.	I learned a lot about myself as a result of O-Group experience.	27	2
36.	The experience has given me new confidence.	23	7
37.	I have become more sensitive in my relationship with people.	29	3
38.	I now have several close, freshman friends.	26	4
39.	I felt that all of a sudden I was supposed to act five years older.	9	22

As was noted in Chapter I, specific behavioral actions for the leadership styles had not been specified in the pilot study. This was remedied in this study and a chart appears in Appendix A indicating the evaluative scoring of observors, leaders and orientation groups on specifically designated leadership behaviors. Observors' scores, of necessity, had to be taken in the first three days of the program when directive leadership was more likely to occur. In cases of discrepancy of leadership style, each specific behavioral action was rechecked in the interview. The conclusion is that student leaders are able to lead groups in styles which can be clearly differentiated and did so in this study. Chapter V which follows presents the summary and conclusions to the data presented in this chapter.

CHAPTER V

SUMMARY AND CONCLUSIONS

Leader selection and leadership methods have been the object of intensive study, particularly since the end of World War II. The controversy between the "traitists," "situationalists" and "behaviorists" continues unabated and the search for effective methods of leadership prediction is still a priority item for managers and deans alike. One of the purposes of this study was to determine whether the educational science of cognitive style could be used to predict effective leadership. A second purpose, still focusing on effectiveness, was to compare the directive and nondirective leadership styles in "assigned" and "build" small groups within an orientation program.

This study involved almost all of the new students of the entering 1972 Fall class of Olivet College and the upperclass orientation leaders. The new students (n = 256) consisted of resident, commuter and transfer students. The upperclass leaders (n = 32) were chosen from approximately 100 student adviser candidates.

The measures used in the study were (1) Leadership profile for leader selections; (2) Cognitive style testing; (3) Orientation group evaluation; (4) Leader self-evaluation; (5) Observation of leadership behavior and (6) Composite interview reaction. All instruments, except the cognitive style testing battery for this study, were designed by the investigator. The cognitive style testing battery was composed at Oakland Community College and the instrument used was in effect a card sort. The results were sent to Oakland Community College for scoring and processing.

Six general questions were posed for exploration and they are listed under the rubric of findings and conclusions. Where these questions generated a hypothesis, the hypothesis was tested: e.g., when there is a difference in leadership style or group construction, there will be a difference in (1) student satisfaction and (2) attendance or attrition rate. The Kmolgorov-Smirnov statistical test was used to test the null hypothesis form of this operational hypothesis $\alpha = .05$ level of significance with the appropriate degrees of freedom.

The emphasis on leadership and group construction has been a part of an action research program at Olivet College for several years. The objectives of this program are to chart and explore new ideas for improving

an existing orientation program and to eliminate alternatives which seemingly have little chance of increasing the effectiveness of the program. The focus on the exploratory nature of the study will be evident in the findings, conclusions, discussion, implications and recommendations.

The specific findings of the study are stated immediately after each question and are presented together with the inferred conclusions for ease of reference and continuity.

Findings and Conclusions

Question 1: How can the educational science of cognitive style be used in the process of predicting effective leadership?

This study has shown, through the use of the technique described by Flanagan that the science of cognitive style can differentiate between the most effective and the least effective leaders. These differentiations are indicated and discussed in question number two.

Thus, two distinct possibilities are readily apparent for the use of the educational science of cognitive style:

1. Cognitive Style can be used as a basis for selection after an appropriate collective cognitive base had been established.

2. Cognitive Style can be used to prescribe certain programs to increase the probability of effective leadership, i.e., an individual lacking the element Q (CEM) might be assigned to a human relations unit prior to assuming the role of leadership.

By utilizing the collective cognitive style to represent the elements needed for effective leadership in a particular situation, it becomes apparent that a "blend" has occurred between the theories advocated by the "traitists," "situationalists" and "behaviorists."

Question 2: How do the most effective student leaders differ from the least effective leaders?

The elements differentiated within the collective cognitive style of the most effective and least effective leaders occur in all three sets of cognitive style: symbolic orientations, cultural determinants and modalities of inference. Within the symbolic orientation of the collective cognitive styles of least effective leaders, a greater number of theoretical orientations appear, while in the most effective leaders a greater number of qualitative orientations occur.

Theoretical Symbols

While both categories of leadership exhibited a T' (AL), Minor Theoretical Auditory Linguistic, ability

to acquire meaning through spoken words, the least effective leadership category also exhibited a T' (AQ), Minor Theoretical Auditory Quantitative, ability to find meaning in terms of quantities (numerical symbols and measurements you hear), and T (VL), Major Theoretical Visual Linguistic, ability to find meaning from words you see, and a T' (VQ), Minor Theoretical Visual Quantitative, ability to find meaning in terms of quantities (numerical symbols and measurements you hear).

The conclusion drawn here is that these extra theoretical elements were not necessary to effective leadership in this situation. Two of these elements are quantitative in nature.

Qualitative Symbols

The most effective leaders' collective cognitive styles contained four qualitative symbols not evidenced in the least effective leaders' collective cognitive style. They include:

Q (A) Qualitative Auditory, which is the ability to perceive meaning through the sense of hearing, particularly as it might apply to nondiscussive symbolic forms of sound.

This would indicate that the most effective leader is more alert to these sounds and can interpret them in a meaningful way for the benefit of the group members.

Q (V) Qualitative Visual, which is the ability to perceive meaning through the sense of sight.

Thus, the effective leader has the ability to immediately visualize the group processes in such a manner that he can recall and piece together at a future time, past events which have meaning for the group at a particular point in time.

Q (CP) Qualitative Code Proxemics, which is the ability to judge "critical" physical and social distances between himself and others in the act of communication.

The effective leader does not alienate his group by misjudging social distance. He can uniquely judge the "comfort" quotient of both the group and himself.

Q (CH) Qualitative Code Histrionics, which is the ability to deliberately exhibit a dramatic flair of emotion or temperament to produce some particular effect on or evoke responses from other persons.

In short, the most effective leader is a good actor, able to give to the leadership role that quality which is often described as charisma.

The qualitative symbol evidenced in the least effective leader's collective cognitive style and not listed in the most effective leader's style is:

Q (CKH) Qualitative Code Kinesthetics, which relates particularly to motor skills and muscular coordination in which following form is considered of prime importance.

Thus, a person with Q (CKH) as a major element is apt to be conscious of emulating a leadership form, without an awareness of its effect upon the group. The emphasis on the process of emulating can lead to a lack of congruence upon the part of the leader and this is quickly sensed by the group. The difference is between "being the leader" and "playing the role" of the leader. Too often, the leader playing the role is perceived by the group as being very mechanical.

Cultural Determinants

The comparison of the collective cognitive styles shows a marked difference between the most effective and least effective leaders in the cultural determinants set. This difference indicates that the family is the major influence on meaning for the most effective leaders while the individual himself is the major influence for the least effective leader. These positions are reversed in the least effective category of leadership.

This influence is a fluid state and it shifts as roles change throughout life and at certain times a particular determinant may play a greater or lesser part in the influence brought to bear on one's perceptions and subsequent meanings to symbols. At this point in time, however, the influence of the cultural determinants of the most effective and least effective leaders in this

situation differ in the respective amounts of influence brought to bear by the cultural determinants. This can best be illustrated by the following figure:

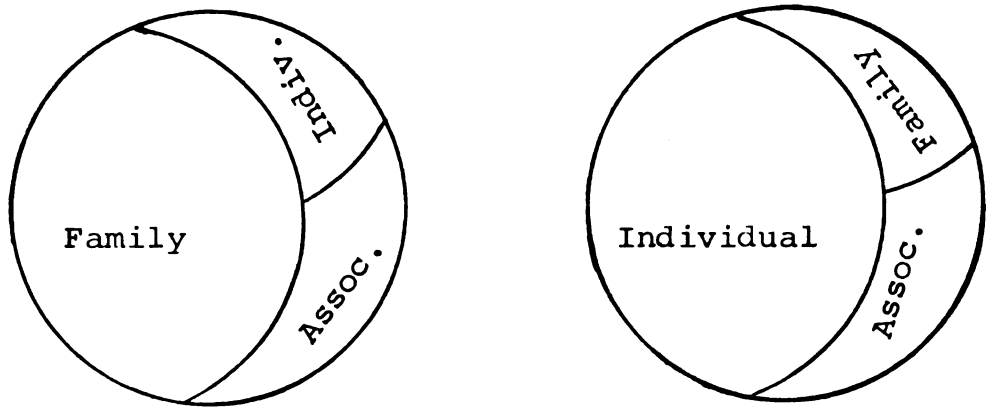


Figure 7.--Differential influence patterns in the cultural determinant set of most and least effective leaders

The reversal of the relative importance of the cultural determinants of family and individuality is the significant difference. The most effective leader is much more apt to treat his group as an extension of his familial orientation while the least effective leader is more strongly dominated by a sense of individuality. This strong individual orientation could lead toward satisfying leader needs rather than group needs, thus serving as a barrier to group satisfaction.

Modalities of Inference

The most effective leaders have two additional elements in how they reach a decision through inductive reasoning.

(D) Difference, which suggests a tendency to think in terms of one-to-one contrasts or comparisons of selected comparisons or measurements.

Thus, the most effective leader is one who is able to differentiate the members of his group, treating them in one-to-one relationships and considering their individual needs.

(L) Appraisal, which indicates that the most effective leader tends to analyze, question or appraise an issue carefully before making a decision.

This type of thinking leads to effective decision-making and increased confidence by the group in the leader. The general conclusion is that there are marked differences in each of the sets of cognitive style between the most effective and least effective leaders. These differences lend promise to future research in predicting leadership through the use of cognitive style.

Male-Female Leadership

One additional difference noted between the most and least effective leaders is that males are significantly more effective as leaders than are females. This difference is highly significant ($p = .01$).

This finding will have to be interpreted carefully in the light of the differences in cognitive styles noted above. The differences of cognitive style may have some relationship to the male-female element

as there is only one crossover of sex in the most and least effective leader groups.

Question 3: Do new students show a preference for leadership style and group construction?

There was no preference exhibited for leadership style as measured by new student satisfaction. There was, however, a tendency to greater satisfaction in the "build" group, but it was not statistically significant.

Question 4: Do leaders show a preference for leadership style and group construction?

There was a preference for nondirective leadership at a high level of statistical significance ($p = .01$) among the leaders. The leaders also showed a preference for "build" groups at a lower level of statistical significance ($p = .10$).

Thirty of thirty-two leaders in the composite interview felt that the leader should size up the group needs and go according to their needs, always looking for the group to take over. A vast majority (90%) felt that the optimum way would be starting the group directively and ending up nondirectively. The leaders felt that there was less confusion in assigning groups, but that new students generally preferred "build" groups.

Question 5: Does leadership and group construction affect the first semester attrition rate?

Leadership and group construction did not affect the attrition rate. In fact, a tendency toward less attrition in the nondirective build category, which was in evidence in the pilot study was not in evidence in this study.

Question 6: Does the use of directive or nondirective leadership affect the attendance rate?

There was no significant difference in attendance between the directive and nondirective groups.

During the orientation program, attendance in the directive groups was emphasized and visibly recorded. In the nondirective groups it was not emphasized nor was it recorded. Leaders in the latter group did, however, covertly keep a record of attendance.

During the leader interviews, special group problems became evident which directly and indirectly affected attendance. One of these problems was the general feeling that upper class students had a negative effect upon new students concerning orientation. Other special problems included groupings for transfer and commuter students as well as for football players to increase attendance probability. This support, however,

did not hold true for music students reporting to the campus for early rehearsals.

Student leaders also do not feel that required attendance is the only way to go, yet more than half of them feel that they would stress attendance despite the negative overtones it might create.

The length of the program has some bearing on the attendance and leaders concluded that increased earlier programming and some modification of length might be beneficial. The leaders also felt that the orientation program for transfer students should be modified to orient them to a different college rather than to college, generally.

Lastly, student leaders indicated that they benefited greatly from the leadership education and experience.

Discussion and Implications

The marked difference between the cognitive styles of the most effective and least effective leaders would imply that the educational science of cognitive style could be a useful tool in predicting effective leadership. Care would have to be exercised in order to be certain that the method of collective cognitive style measurement is isomorphic to a predictive leadership pattern. For example, the problem of weighting elements could be a

crucial factor, as well as the relative significance of each of the three sets and eventually the fourth set of memory-concern. In addition to predicting effective leadership in a given situation, it would be possible through the matching of an individual's cognitive style to the collective cognitive style, to determine areas of potential leadership weakness. Leader education programs could therefore tailor their instruction to these specific areas to insure greater probability of effective leadership.

The differences in the collective cognitive styles of the most effective and least effective leaders definitely emphasized the qualitative aspect of effective leadership. The increased number of qualitative symbols, the familial cultural determinant and the onus on differences as well as appraisal processes in the inductive approaches to decision-making all indicate that "consideration" of group members appears to be a unifying thread throughout the pattern of differences. The analysis of data shows that whether the group is led directively or nondirectively is unimportant, but that the leader's feeling of true concern is all-important. Evidently, the new student has sufficient motivation and the flexibility to adapt to either a directive or nondirective process.

The first and foremost implication is that the purposes and objectives of the orientation program must be well planned, delineated and rank ordered according to priority. If the effectiveness of the program is the prime consideration, then initial selection is vital and the results of this study would indicate greater use of male leaders. If the orientation process is also conceived of as an educational venture seeking to present equality of opportunity and self-improvement of leaders, then assessment and education for leadership would be of all importance. Normally, an orientation program is established to decrease the attrition rate. However, if this cannot be statistically substantiated and a certain amount of information must be assimilated by new students, then another possibility which is a little more progressive would be to utilize the program as an educational device for those deficient in leadership skills, i.e., in this study, greater opportunity for women.

This study indicates that it is immaterial whether a leader leads directively or nondirectively so the student should be allowed to lead in the manner that best fits his own personality. However, the leadership education program should present the facets of both directive and nondirective leadership so that the students are aware of the dimensions of each style, as well

as the elements which contribute to effective leadership. The program should definitely attempt to eliminate areas of potential leadership weakness. The strong support by leaders of a situational type of leadership in which they start directively and end nondirectively should be explored.

Although not indicated to be statistically significant, there was a definite trend toward greater satisfaction in the "build" groups. This also was evidenced in the composite interviews of leaders. Fifty per cent of the new students were not members of "build" groups and therefore did not share the experience. Students expect their college experience to be different; they expect to participate in decision-making and build groups contain both elements. The tendency toward greater satisfaction in the "build" groups would imply additional experimentation with build groups in terms of size and composition.

Kronovet's[94] study had indicated that 80 per cent of the institutions required attendance at orientation programs. In essence, this study would favor the abolition of emphasized attendance in favor of an initial statement of "expectancy of attendance as a student seeking a college education." At this initial meeting, the purposes and objectives of the orientation program

---

[94]Kronovet, op. cit.

would be clearly defined and the benefits from the program enumerated. The program as designed would have to be meaningful to the student and it is hypothesized that his motivation at this particular time plus a meaningful program structured within small groups would insure satisfactory attendance. The data in this study support this hypothesis.

Implication for future research would include ascertaining collective cognitive styles for a variety of situations in which selection is a necessity, and then testing the predictive effectiveness of the collective cognitive style with the individual candidate. Another study could ascertain the cognitive styles of individuals and match them with a previously defined collective cognitive style. Then, using control and experimental groupings, a leadership education program could be administered with a subsequent remapping of the cognitive style to determine changes. Differences in effectiveness could then be measured between the groups. A specialized study could be one to investigate the backgrounds of the most and least effective leaders in respect to F (family) and I (individual) majors in the cultural determinants set.

Recommendations

This has been an exploratory study in the use of the educational science of cognitive style as a predictor

of group leadership within an orientation program. As such, it has indicated that effective leadership has a strong relationship to the qualitative elements that represent a leader's cognitive style. In view of the results of this study, the following recommendations are made:

1. A related study using a similar population base should be undertaken to test these findings in a predictive situation.

2. A leadership education program should be created based upon the evaluation and subsequent re-evaluation of an individual's cognitive style toward increased effectiveness in leadership.

3. Special leadership training and experience for female students should be made available.

4. The emphasis for effective leadership in an orientation program should focus on consideration and concern, i.e., human relations. The idea of starting directively, when the initial impact is overwhelming to a new student and gradually becoming nondirective as he becomes more secure has the ingredients of a situational leadership style which is the method most preferred by student leaders and could serve as the starting point of a leadership education program.

5. The emphasis on required attendance should be modified, a simple statement indicating that students are expected to assume responsibility for their attendance should suffice as long as the purposes and objective of the orientation program are clearly presented and small group techniques used.

6. Special programs should be instituted for special groups, i.e., commuters, athletes, and transfer students. This latter group should be oriented to a <u>different</u> college rather than to college as are other new students and this process should be of shorter duration.

7. A recommendation which stems from the literature is that a faculty member should be included in the structure of the small group. This could be initiated on an optional basis and inservice training in small group leadership provided for the faculty member.

8. A day, if needed, should be added at the beginning of the program and the bulk of the orientation process completed <u>prior</u> to the arrival of upper class students.

BIBLIOGRAPHY

BIBLIOGRAPHY

Allport, Gordon. Personality and Social Encounter. Boston: Beacon Press, 1960.

Argyris, Chris. "Essay Review." Harvard Educational Review, VIII, No. 4 (1971).

Bavelas, Alex. "Morale and the Training of Leaders." Civilian Morale. Edited by G. Watson. Boston: Houghton Mifflin, 1942.

_____. "Communications in Task Oriented Groups." The Police Sciences. Edited by D. Lerner and Lt. D. Lasswell. Stanford, Calif.: Stanford University Press, 1951.

Bellows, Roger. Creative Leadership. Englewood Cliffs, N.J.: Prentice Hall, 1969.

_____. Psychology of Personnel in Business and Industry. 2nd ed. Englewood Cliffs, N.J.: Prentice Hall, 1954.

Bird, Charles. Social Psychology. New York: D. Appleton Century Company, 1940.

Bloom, Benjamin, ed. Taxonomy of Educational Objectives. New York: David McKay Company, Inc., 1956.

Bales, R. F., et al. "Channels of Communication in Small Groups." American Sociological Review, XVI (1951).

Brameld, Theodore. Education as Power. New York: Holt, Rinehart and Winston, Inc., 1965.

Brown, William F., and Zunker, Vernon. "Student Counselor Utilization at Four Year Institutions of Higher Learning." Journal of College Student Personnel, VII, No. 1 (January, 1966).

Cartwright, D., and Zander, A. Group Dynamics. Evanston, Ill.: Row Peterson & Company, 1953.

Chickering, Arthur. Education and Identity. San Francisco: Jossey-Bass, Inc., Publishers, 1969.

Cowley, W. H. "The Traits of Face to Face Leaders." Journal of Abnormal and Social Psychology (1931-32).

DeCecco, John P. Regeneration of the School: Decision Making in a Democracy. New York: Holt, Rinehart and Winston, Inc., 1972.

DeLoach, Joseph F. Cognitive Style and Cognitive Dissonance. Bloomfield Hills, Mich.: Oakland Community College Press, 1970.

Dugger, June Armistead. "A Study of Measurable Personal Factors of Leaders and Non-Leaders Among University Freshman Women: The Florida State University 1969." Dissertation Abstracts International, XXX, Nos. 4-6 (1969).

Eagley, Alice H. "Leadership Style and Role Differentiation as Determinants of Group Effectiveness." Journal of Personality, XXXVIII, 509.

Eaton, Joseph W. "Is Scientific Leadership Selection Possible?" Studies in Leadership. Edited by Alvin Gouldner. New York: Harper & Bros. Publishers, 1950.

Fielder, Fred E. A Theory of Leader Effectiveness. New York: McGraw-Hill Book Company, 1967.

Fitzgerald, Laurine D., and Busch, Shirley A. "Orientation Programs: Foundation and Framework." College and University Business, XXXVIII (April, 1963).

Flanagan, John C. "General Considerations in the Selection of Test Items and a Short Method of Estimating the Product-Moment from the Data at the Tail of the Distribution." Journal of Educational Psychology, XXXII (December, 1939).

Gagne, Robert M. The Conditions of Learning. 2nd ed. New York: Holt, Rinehart and Winston, Inc., 1970.

Gardiner, John W. Excellence: Can We Be Equal and Excellent Too? New York: Harper & Rowe Publishers, Harper Colophon Books, 1961.

Gardner, Riley W. "Cognitive Styles in Categorizing Behavior." Journal of Personality, XXII (1953).

Getzels, J. W., and Guba, E. B. "Social Behavior and the Administrative Process." School Review, LXV (Winter, 1957).

Gibbs, Cecil. "The Principles and Traits of Leadership." Journal of Abnormal Social Psychology (1947).

Gibbs, Jack R. Dynamics of Leadership, Defensive and Emergent. Chicago, Ill.: 22nd National Convention on Higher Education, March 7, 1967.

Goldsen, Rose K. "Recent Research in the American College Student." Orientation to College Learning. Edited by Nicholas Brown. Washington, D.C.: American Council of Education, 1961.

Gordon, Thomas. Group Centered Leadership. Boston: Houghton Mifflin Company, The Riverside Press Cambridge, 1955.

Gouldner, A. W., ed. Studies in Leadership. New York: Harper Brothers, 1950.

Grier, Daniel J. "Orientation--Tradition or Reality?" Journal of National Association of Student Personnel Administration, III, No. 3 (January, 1966).

Guilford, J. P. "Dimensions of Intellect." International Colloquium on Factor Analysis, Paris, 1955.

_____. "The Structure of Human Intellect." Paper presented to the National Academy of Sciences, Pasadena, California, November, 1955.

Guttman, Louis. "An Outline of Some New Methodology for Social Research." Public Opinion Quarterly, XVIII (Winter, 1954-55).

Halpin, Andrew W., and Winer, B. James. "A Factorial Study of the Leader Behavior Descriptions." Leader Behavior: Its Description and Measurement. Edited by Ralph M. Stogdill and Alvin E. Coons. Columbus: Ohio State University, 1957.

Hemphill, John K. Situational Factors in Leadership. Monograph No. 32 (Columbus: Ohio State University Studies, Bureau of Educational Research, Ohio State University, 1949), p. 45.

Hemphill, John K., and Coons, Alvin E. "Development of the Leader Behavior Description Questionnaire." Leader Behavior: Its Description and Measurement. Edited by Ralph M. Stogdill and Alvin E. Coons. Columbus: Ohio State University, 1957.

Hill, Joseph E. The Educational Sciences. Bloomfield Hills, Mich.: Oakland Community College Press, 1971.

Hofmann, Randall, and Plutchuck. Small Groups in Orientation and Teaching. New York: G. P. Putnam's, 1959.

Homans, George C. The Human Group. New York: Harcourt, 1950.

Hoogasian, Vaughn. "An Examination of Cognitive Style Profiles as Indicators of Performance Associated with a Selected Discipline." Unpublished Ph.D. dissertation, Wayne State University, 1970.

Ivey, Allen E. "A Three Year Evaluation of a College Freshman Week Program." Journal of College Student Personnel, III (October, 1961), 25-32.

Jenkins, William O. "Review of Leadership Studies with Particular Reference to Military Problems." Psychological Bulletin, January, 1947.

_____. "Review of Leadership Studies with Particular Reference to Military Problems." Psychological Bulletin, 1947, pp. 44, 54-79.

Jennings, H. H. Leadership and Isolation. New York: Longmans, Green & Co., 1943.

Kelly, Earl C. Education for What Is Real. New York: Harper & Row Publishers, 1947.

Kemp, Clarence Gratton. Perspectives on the Group Process. Boston: Houghton Mifflin Company, 1964.

Kimura, Doreen. "The Assymetry of the Human Brain." Scientific American, CCVIII, No. 3 (1973), 70.

Kopecek, Robert J. "Freshman Orientation Programs: A Comparison." Journal of College Student Personnel, VIII, No. 5 (September, 1967), 51-52.

Kronovet, Esther. "Current Practices in Freshman Orientation." Improving College and University Teaching, XVII (May, 1969), 204-05.

Lange, Chrystal Marie. "A Study of the Effects on Learning of Matching the Cognitive Styles of Students and Instructors in Nursing Education." Unpublished Ph.D. dissertation, Michigan State University, 1972.

Lewin, Kurt; White, Ralph; and Lippitt, Ronald. "Patterns of Aggressive Behavior in Experimentally Created Social Climates." Journal of Social Psychology, X (1939), 271-79.

_____. "The Consequences of an Authoritarian and Democratic Leadership." Study on Leadership. Edited by Alvin A. Gouldner. New York: Harper.

Martin, W. F.; Gross, N.; and Darley, J. G. "Leaders, Followers, and Isolates in Small Groups." Journal of Abnormal Social Psychology, XLVII (1952), 842.

McGrath, J. E. A Summary of Small Group Research Studies. HSR/TN-62/3-GN. Cited in Fred E. Fiedler. Arlington, Va.: Human Sciences Research, Inc., 1962.

Mueller, Kate H. Student Personnel Work in Higher Education. Boston: Houghton Mifflin Company, 1961.

Miller, C. Dean; and Ivey, Allen E. "Structure Response to Three Types of Orientation Programs." Personnel and Guidance Journal, XLV (June, 1967), 1,025-29.

Munn, R. D. "A Review of the Relationships Between Personality and Performance in Small Groups." Psychological Bulletin, LVI (1959), 241-70.

New York State Regents Advisory Committee on Educational Leadership. Leadership for Education, 1967.

Ort, Barbara. "An Examination of Relationships Between the Measurable Cognitive Characteristics of a French I Teacher and the Student Success in That Course." Unpublished Ph.D. dissertation, Michigan State University, 1971.

Pappas, John G. "Student Reaction to a Small Group Orientation Approach." College and University, XLIII, 84-87.

Patty, Austin H. "Freshman Orientation: A Growing Concern." Improving College and University Teaching, XIV (Summer, 1966), 184-88.

Peltz, P. C. "Leadership Within an Hierarchal Organization." Journal of Social Issues, VII, 49-55.

Pigors, Paul. Leadership or Domination. Cambridge, Mass.: The Rivergate Press, 1935.

Rothman, Leslie K., and Leonard, Donald G. "Effectiveness of Freshman Orientation." Journal of College Student Personnel, VIII, No. 5 (September, 1967).

Sanford, Nevitt. "Recent Research in the American College Student Orientation to College Learning." American Council in Education. Edited by Nicholas C. Brown. Washington, D.C.: 1961.

Schroeder, Arlen V. "A Study of the Relationship Between Student and Teacher Cognitive Styles and Student Derived Teacher Evaluation." Unpublished Ph.D. dissertation, Wayne State University, 1969.

Selznick, Phillip. Leadership in Administration. New York: Harper & Row Publishers, 1957.

_____. "Personal Factors Associated With Leadership; A Survey of the Literature." Journal of Psychology, XXV (1948), 35-71.

Shaw, Marvin E., and Blum, J. Michael. "Effects of Leadership Style Upon Group Performance as a Function of Task Structure." Journal of Personality and Social Psychology, III, No. 2 (February, 1966), 241.

Siegel, Sidney. Nonparametric Statistics for Behavioral Sciences. New York: McGraw Hill Book Co., 1956.

Smith. Cited in Earl Kolle, Vincent Harris and Carolyn Dragger. "Orientation Programs." Review of Educational Research, XXXVI, No. 2 (April, 1966), 243.

Snodowsky, Alvin M. "Group Effectiveness as a Function of Communication Networks, Task Complexity and Leadership Type." Dissertation Abstracts International. The City University of New York, 1969.

Stodgill, Ralph M. "Personal Factors Associated With Leadership: A Survey of the Literature." The Journal of Psychology, XXV (1948).

Tannenbaum, R.; Weschler, I.; and Massarik, F. Leadership and Organization. New York: McGraw Hill, 1961.

Tautfest, Patricia B. "An Evaluation Technique for Orientation Programs." Journal of College Student Personnel, XXX (October, 1961), 25-32.

The Hazen Report. The Student in Higher Education. Report of the Committee on the Student in Higher Education, The Hazen Foundation.

Wharton, John F. "The Making of Leaders." Saturday Review, April 13, 1968.

White, Ralph, and Lippitt, Ronald. "Leader Behavior and Member Reactions in Three Social Climates." Group Dynamics, Research and Theory. Edited by Darwin Cartwright and Alvin Zander. Evanston, Ill.: Row, Peterson & Co., 1953.

Williams, Stanley B., and Leavitt, Harold. Journal of Consulting Psychology, No. 11 (1947), 283-91.

Witken, H. A. "Differences in Ease of Perception of Embedded Figures." Journal of Personality, XVIIII, 1-15.

Wyett, Jerry L. "A Pilot Study to Analyze Cognitive Style with Reference to Selected Strata of the Defined Educational Sciences." Unpublished Ph.D. dissertation, Wayne State University, 1967.

Zussman, Steven. Cognitive Style and Administration Style. Bloomfield Hills, Mich.: Oakland Community College Press, 1971.

APPENDICES

APPENDIX A

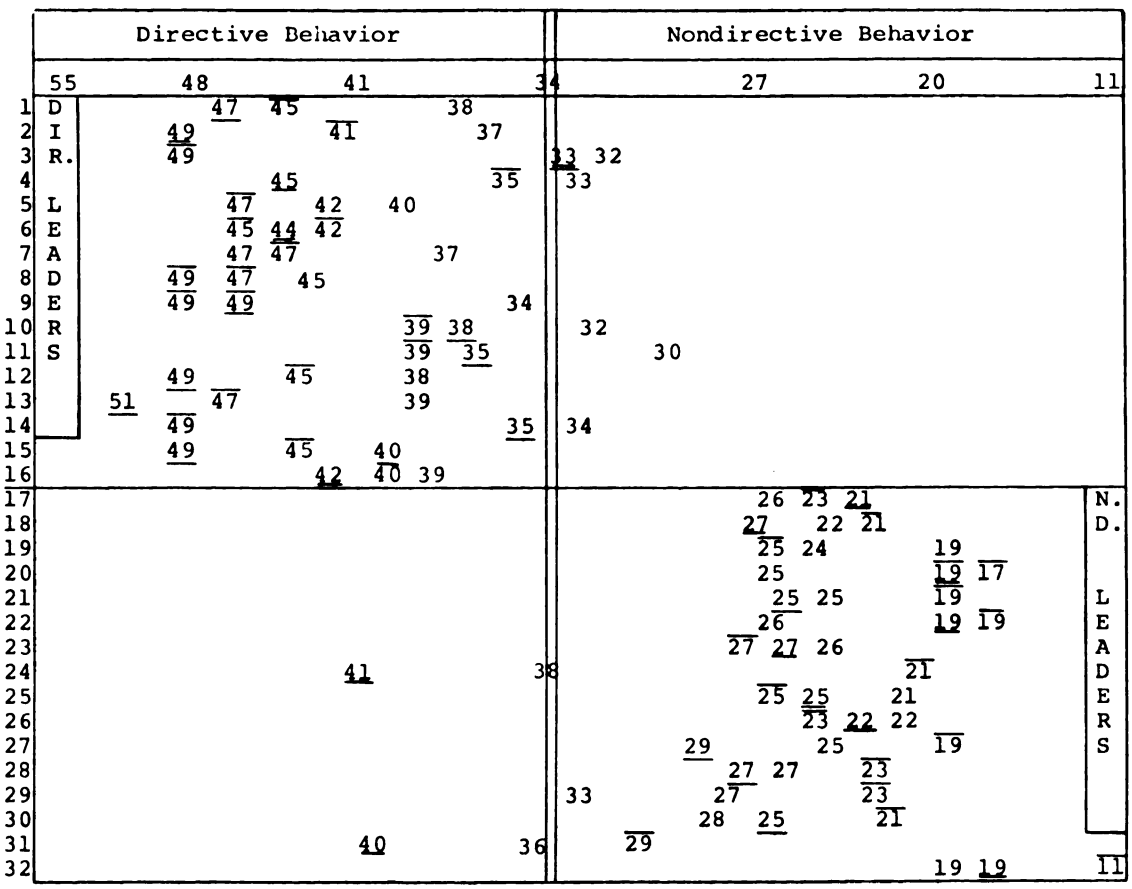
COMPOSITE OBSERVATIONS OF LEADERSHIP BEHAVIORS

APPENDIX A

COMPOSITE OBSERVATIONS OF LEADERSHIP BEHAVIORS

Leadership Observations

Scoring is derived from assigning values of 5, 1, 3 to specific behaviors listed on evaluation sheets.



Legend: X Mean Score, three observors of Leadership Behaviors

$\overline{X}$ Leader self-evaluation of behavior

X Mean Score of group members of Leadership Behaviors

APPENDIX B

STUDENT ADVISER

LEADER SELECTION PROFILE

APPENDIX B

To:

From: Dean Sigren

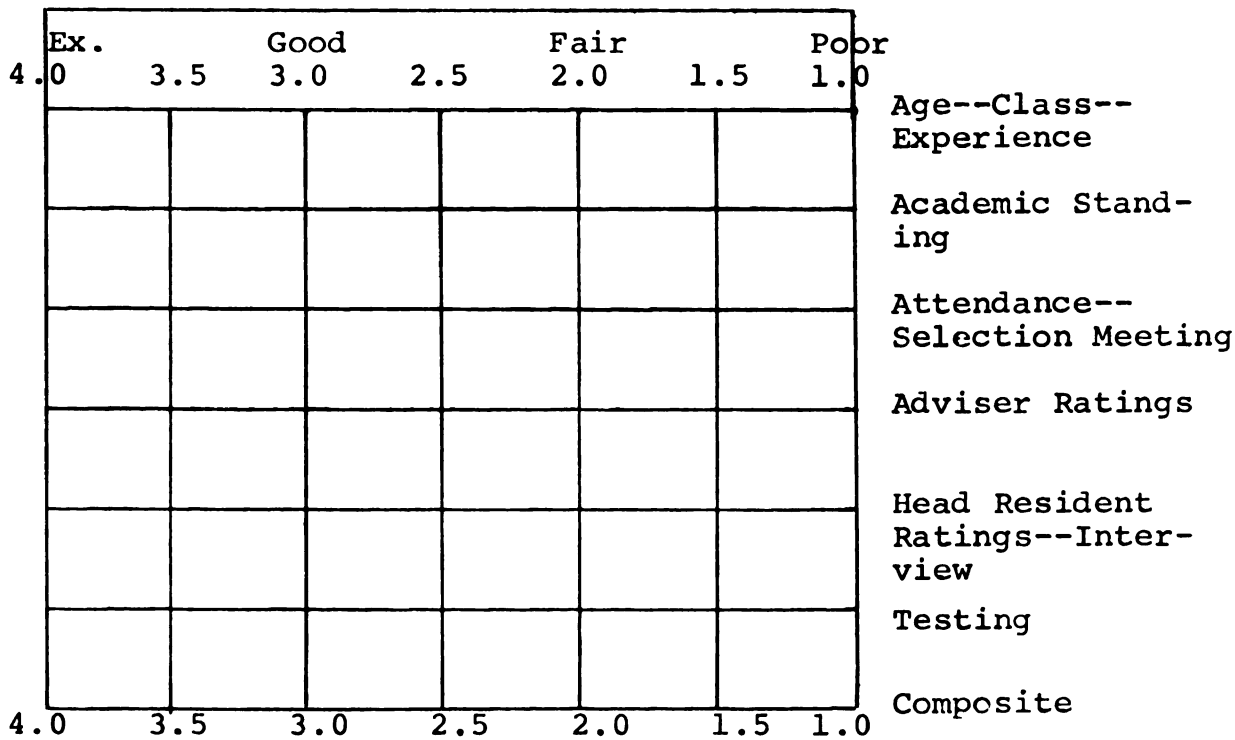
Re: Student Adviser Application

A committee made up of Head Residents and the Director of Housing have evaluated your application and as a result you have been assigned to the following classification.

( ) Student Adviser--pending semester grades

( ) Alternate status--pending openings and rankings of alternates.

Here is your profile.



Remarks: _____

_____

Thank you for your participation in the selection program. We hope you have gained some understanding of both yourself and the program. If you are an underclassman, we invite you to apply again next year.

APPENDIX C

INDIVIDUAL-ORIENTATION GROUP EVALUATION

APPENDIX D

LEADER SELF-EVALUATION

_____

Your Name

Circle the number of the phrases which best represents your behavior as the O-Group Leader.

1) referred to group as "my" group
2) referred to group as "our" group
3) not observable

4) assigned the meeting place
5) group decided meeting place
6) not observable

7) sat at the head of the group
8) blended into the group
9) not observable

10) took attendance
11) did not take attendance
12) not observable

13) leader announced schedule
14) group members announced schedule
15) not observable

16) group meetings followed a definite pattern
17) group meetings were very informal
18) not observable

19) leaders settled conflicts in group
20) allowed group to settle conflicts
21) not observable

22) leader assigned responsibilities
23) group decided on assignments
24) not observable

25) leader made decisions
26) group made decisions
27) not observable

28) encouraged members to participate
29) allowed members to participate as they desired
30) not observable

31) Made frequent suggestions and provided information
32) made suggestions and provided information about the same as other group members
33) not observable

Circle the X on the following continuum which best represents your position as the O-Group leader.

X	X	X	X	X	X	X
Personally took charge of group		Leader, but more as a member of the group		Became just a regular member of the group		The group actually took charge

Circle the X on the following continuum which best represents your feeling about the manner in which your group was led.

X	X	X	X	X	X	X
Very Satisfactory		Satisfactory		Somewhat Satisfactory		Unsatis-factory

O-Groups were either assigned or self-selected. Circle the X on the following continuum which best represents your feeling about how your O-Group was formed.

X	X	X	X	X	X	X
Very Satisfactory		Satisfactory		Somewhat Satisfactory		Unsatis-factory

Circle the X on the continuum which best represents how you feel the O-Group Program has assisted you in starting your first year on the Olivet Campus.

X	X	X	X	X	X	X
Very Satisfactory		Satisfactory		Somewhat Satisfactory		Unsatis-factory

Circle the X on the following continuum which best represents your attendance in the O-Group sessions.

X	X	X	X	X	X	X
All		Most		Some		None or very few

Would you recommend the O-Group experience for new students next fall? ( ) yes ( ) no
Please add any comments you might have for additions or improvements to the O-Group program, as well as suggestions for the leader and manner of leading. Use reverse side.

OVER

APPENDIX E

RATING FORMS LEADERSHIP BEHAVIOR

APPENDIX E

RATING FORM LEADERSHIP BEHAVIOR

Observor_____
Date_____
Time_____
Location_____

_____
O-Group Leader

_____
O-Group #

Circle Number which applies or N.O. (Not Observable)

Meeting Place

N.O. 1. Assigned place of meeting
2. Group decision of meeting place

Seating

N.O. 1. Sat at the head of the group
2. Blended in with group

Initiation of Action Within the Group

N.O. 1. Visibly recorded attendance
2. No visible recording of attendance

N.O. 1. Referred to group as "my" group
2. Referred to group as "our" group

N.O. 1. Leader announced schedule
2. Group announced schedule

N.O. 1. Group meetings followed a definite pattern
2. Group meetings very informal

N.O. 1. Leader settled conflicts in the group
2. Allowed group to settle conflicts

N.O. 1. Leader assigned responsibilities
2. Group decided on assignments

N.O. 1. Leader made decisions
2. Group made decisions

N.O. 1. Encouraged group to participate
2. Allowed members to contribute as they desired

N.O. 1. Made frequent suggestions and volunteered information
2. Made suggestions and volunteered information only as a regular member of the group and after others had an opportunity

Circle the X on the following continuum which best represents the above Group Leader.

X	X	X	X	X	X	X
Personally took charge of group		Leader, but more as a member of the group		Became just a regular member of the group		The Group actually took charge

APPENDIX F

COGNITIVE MAPPING CARD SORT QUESTIONS

APPENDIX F

COGNITIVE MAPPING CARD SORT QUESTIONS
Oakland Community College

The following questions are marked usually, sometimes, or rarely. There are eight questions in each of twenty-seven categories and a total of two hundred and sixteen questions.

Samples of questions

Theoretical Symbols

T (AL) - I find it easy to add spoken or dictated numbers easily.

T (VL) - I score high on achievement tests which emphasize reading comprehension.

T (AQ) - I find it necessary to write down a telephone number as soon as I hear it or I cannot remember it.

Cultural Determinants

I - When given a job to do, I prefer to work on it myself.

A - I like to share ideas with friends and associates.

Qualitative Codes

Q (CS) - I can anticipate accurately how well I will do in a new situation.

Q (CH) - I can act attentive and interested even though bored when listening to a teacher or supervisor.

Q (CET) - I would give up a monetary gain to avoid a compromise of principles.

Q (CT) - I am able to persuade people in disagreement to strive for agreement.

Modalities of Inference

R - I have no difficulty in understanding how to put puzzles together.

K - I avoid probability statements in solving problems.

L - I take longer than others in coming to a conclusion, because I want to know more about an issue than others do.

APPENDIX G

INTERVIEW SESSION--WORKSHEET
COMPOSITE INTERVIEW REACTIONS

APPENDIX G

INTERVIEW SESSION--WORKSHEET--COMPOSITE REACTIONS
O-Group Leaders, December 1972
"How Can The Orientation Program Be Improved"

Please place an (A) for agree next to those items which you feel would enhance the Orientation Program. Place a (D) for disagree next to the statements which would not be beneficial to the program.

General

A	D	
27	3	The program is great at the beginning, but becomes a hassle later on.
21	10	Students would prefer to be members of build groups.
20	13	Since students are eventually going to be on their own, they should have the experience of nondirective groups.
5	25	Directive is best as that's what they are used to.
23	9	There is less confusion in assigning the groups.
22	5	"Optional and good" is the secret to programming.
5	22	Required attendance is the only way to go.
4	27	The program pace was too fast in the beginning.
30	2	The Leader should size up the group needs and go according to their needs always looking for the group to take over.
14	17	Students have a feeling, "unless it goes on my record, it's unimportant."
24	7	The Painting Exercise--Project Alpha was excellent for getting students out of their shells.
17	14	There is value in having the program go until midterm.
21	9	Coming early by Football and Music students affects their attitude negatively toward the program.
25	7	Upperclassmen affect new students attitudes toward orientation, negatively.

12 19 Separating groups out will destroy a sense of community.

25 3 Start Directive in leadership and end Nondirective (Situational Leadership).

Brainstorming allows for hitchhiking on other ideas. Please add any suggestions or comments.

Personal

A D

27 2 I learned a lot about myself as a result of the O-Group experience.

26 4 I now have several close, freshman friends.

18 11 I was successful in going according to the specific behavioral objectives when leading.

25 6 I feel eight plus a leader is an ideal size group.

23 7 The experience has given me new confidence.

29 3 I have become more sensitive in my relationship with people.

9 22 I felt that all of a sudden I was supposed to act five years older.

24 7 I feel the inservice training given prior to the O-Group experience was adequate.

Please indicate any ways in which the O-Group opportunity did or did not add to your leadership skills.

Suggestions

A D

30 2 An individual sheet for each member on activities so they can read and discuss rather than the O-Group leader read off.

25 4 Drop the summer reading On Becoming an Educated Person.

20 11 Structure work sheets so that students can work at their own speed. Have just a final turn-in date.

24 6 Tie the initial program in with the Convocation Program.

19 11 The meetings should be bi-weekly, alternating with the Convocation Program.

20 11 There should be a separate program for football players.

30 1 There should be separate programs for transfer students.

13 19 There should be separate programs for music students.

24 9 Eat together for the first dinner and breakfast only.

26 4 Set up a different library sheet for each member of the group. Thus, they can work on their own or as part of the group.

15 17 The comp test could be separated into parts and made more specific.

27 3 A new format is needed for Sunday. Perhaps sports activities, games, recreation, etc.

26 6 There should be a separate program for commuters.

5 26 There should be one football player, one commuter, and one transfer student in each group.

14 16 Have a program on the History of Olivet College.

16 14 Stress the attendance--more reluctance, but they enjoy it when they are there.

18 13 The program is too long. Have it twice a week for three weeks.

22 8 Sunday brunch was a bomb--drop it.

22 10 Meet fewer times, but make more substance to the meeting.

25 7 Go three or four weeks and then have a "reunion" at midterm.

25 6 Have inservice academic advising for O-Group leaders.

26 5 Set up individual conferences for O-Group academic advising.

32 0 Have interaction between O-Groups.

26 4 Initially have four days rather than three--spread out activities with more free time.

21 9 Have a tournament of O-Groups on Sunday--Consolation brackets, prizes, etc.

23 8 Have a scavenger hunt, like getting the inscription off Father Shipherd's grave, the name of the printing press, etc.

17 14 Have a treasure hunt.

25 6 Equalize the sexes in the groups.

13 17 Start the Orientation Program early for those who come early.

31 1 Get the program to end on a climactic note, rather than downhill.

21 10 Set up a crossword puzzle to get across pertinent information.

22 9 Set up a special night and time for O-Group meeting to eliminate hassle of deciding the meeting dates.

9 21 The hassle is what it's all about.

13 14 Have Orientation assigned as part of the scheduling process and switch leaders around accordingly.

27 4 Program should be shorter for transfer students.

25 7 Orient transfer students to a different school rather than to college.

Your additional ideas.