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A Comparison of the Leadership Styles of Principals and Factors of Organizational Climates of Selected Open Space Suburban Elementary Schools

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A COMPARISON OF THE LEADERSHIP STYLES OF PRINCIPALS AND FACTORS OF ORGANIZATIONAL CLIMATES OF SELECTED OPEN SPACE SUBURBAN ELEMENTARY SCHOOLS

by

Theodore E. Hagensee

A Dissertation Submitted to the Faculty of the Graduate School of Loyola University of Chicago in Partial Fulfillment of the Requirements for the Degree of Doctor of Education

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ABSTRACT

PURPOSE

The purpose of this study was to compare leadership styles of principals with the behavioral characteristics of teachers in suburban elementary schools that featured the open space type of environment. Sample schools had to satisfy the following open space dimensions:

1. An abundance of open space existed with its inherent flexibility of movement;
2. Flexibility in grouping permitted student mobility;
3. Communication between open space occupants was easy and frequent; and
4. Teacher planning was a cooperative venture.

The following questions were investigated:

1. If principals in open space schools favored relationships orientation (RO) more than task orientation.
2. Whether leadership styles of open space principals were equally distributed among eight categories: executive, benevolent autocrat, bureaucrat, developer, compromiser, autocrat, missionary, and deserter.
3. If as many principals favored more effective leadership styles as often as less effective styles.
4. Did staff satisfaction correlate with principal concern for relationships orientation.
5. Whether principals concern for task orientation was related to staff direction and control.
6. How did principal managerial effectiveness compare with staff job satisfaction.

PROCEDURE

The sample of the study consisted of twelve schools in the Chicago metropolitan area which satisfied the open space dimensions. Leadership style was identified by the Reddin Management Style Diagnosis Test (MSDT). Factors of school climate and characteristics of teacher-principal behavior were established through the Halpin and Croft Organizational Climate Description Questionnaire (OCDQ).

The hypotheses of the study were tested by the means of t-tests, chi-square, and Spearman's rank-difference coefficient of correlation.

RESULTS

The hypotheses were posed with the intention of proving the existence of a link between the leadership style of principals and the behavioral characteristics of the teachers in open space schools. The data showed that 83% of the sample principals favored high RO. Leadership style was not equally distributed since 75% of the principals were identified with the same style: developer. Among the sample principals 83% rated a more effective leadership style. Correlations calculated for data to prove the last three hypotheses were too low to show significance.

CONCLUSIONS

1. In the sample schools the extent to which a principal directed his own efforts and those of his subordinates was characterized less often by initiating, organizing, and directing (task orientation), than by listening, trusting, and encouraging (RO).

2. Principals generally displayed the leadership style of a developer, accepting others as they are, using conversation for communication, showing a good example by getting along with others, and correcting mistakes of others by pleasantly offering suggestions.

3. Open space principals were rated as more effective leaders rather than as less effective leaders.

4. Teacher attitudes of satisfaction toward their school as an organization could not be predicted from the leadership style of the principal.

5. Principals showed little inclination toward task orientation. Teachers did not recognize any social control exercised by their principals. Teachers favored direction and control less than they favored intimacy and consideration.

6. There was no direct relationship in the sample schools between leadership effectiveness as measured by the MSDT and staff job satisfaction as measured by the OCDQ.

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Earnest appreciation is expressed to Dr. Joan Ferris, who read through the manuscript, and to Zadell Burton and Marjorie Slattery, who assisted in its preparation.

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VITA

Theodore E. Hagensee was born to Bronislaw Hagensee and Martha (Bielawa) Hagensee on April 21, 1923, in Chicago, Illinois.

He was graduated from St. Hedwig Elementary School in 1938, and Lane Technical High School in 1942. After serving three years in the Army Air Force, including a year at Denison University, Granville, Ohio, he returned to Chicago Teachers College receiving a degree as Bachelor of Education in January, 1948. A year later, he received the degree of Master of Science of Mathematics from DePaul University, Chicago. He did graduate work at the University of Chicago and Loyola University of Chicago.

He taught mathematics at St. Xavier College and the Chicago Jewish Academy before joining the Chicago Board of Education. From 1953 through 1962, he was a teacher of mathematics at Crane High School. Since 1962, the author has been principal of the Jacob A. Riis Elementary School on Chicago's Near West Side. He was awarded the degree of Doctor of Education in May, 1980.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ILLUSTRATIONS

CHAPTER I

INTRODUCTION TO THE STUDY

Elementary schools have changed from the one room schoolhouse of Colonial and rural America to the egg-crate structures of the 1950's, to the open space facilities of the 1960's and 1970's. The one room schoolhouse known to Colonial and rural Americans was the work area for one teacher and a class of children of many ages. The teacher, usually male and called the Schoolmaster, was required to teach all achievement levels in the same room, at the same time, in all subjects. To assist him, the more advanced students lent a hand in "team teaching" or perhaps in "individualizing instruction." They further helped by tutoring and listening to the recitations of the younger children. For all students, the word of the Schoolmaster was law to be obeyed without hesitation. Recalcitrant students became familiar with the "hickory stick" when they defied the orders of the Schoolmaster. How different, and yet in some ways, how similar are the schools of today.

Today, egg-crate schools are still in popular use. They are, in effect, one room schoolhouses placed back to back or all in a row. Each classroom is self-contained with more homogeneous grouping than its one room ancestor.

The teacher is usually female. While corporal punishment is seldom used, the teacher is still the undisputed master. No matter what style of teaching is used, the teacher is safe from inquisitive eyes once the classroom door is shut.

Not so in today's open space school. The teacher and students are always in someone's view. A visitor at one end of an open space building can easily observe any one of three or four teachers and classes. The American Association of School Administrators amplified this point in its report on Open Space Schools:

> The teacher does not work alone. Every method and technique which a teacher employs with a small or large group in an open classroom is visible to every other member of the team, and must be harmonious with the rest of the team. Because she is under the constant observation of others, a teacher in an open school must be flexible.[1]

To understand why teachers must act differently in open space schools, one needs to understand clearly the concept of an open space school.

An open space school is a facility containing large areas of space commonly used by many teachers and students. Heller and Rancic have given a clear description of the open space classroom:

> The typical open classroom is round, rectangular, or half moon in shape and is unobstructed by solid dividing walls. It is a large open space, usually

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[1]AASA Commission on Open Space Schools, Report of the Commission, Open Space Schools (Washington, D. C.: American Association of School Administrators, 1971), p. 23.

> carpeted and accoustically tiled, where several teachers, sometimes as many as 12-16, work formally and informally with groups of children.[2]

The word "open" has other connotations which require clarification. These are the "open classroom," and the "open climate" of a school. The terms open space and open classroom are not synonymous. Sabaroff and Hanna pointed out the difference:

> The open classroom is often thought of as an open space, created by removing walls between classrooms. However, the open classroom really starts in the openness of the teachers' outlook . . . Teachers and children alike must learn to become open with one another and trust each other.[3]

Obviously, this type of "open classroom" has the potential to exist in either an open space school or an egg-crate school. The concept of an open classroom had its origins in the British Primary Schools but is currently popular with American educators. This open classroom concept is clearly described and discussed in the Plowden Report.[4] Several authors have written books on the subject. Brown and Precious[5] outlined this for the American audience.

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[2]Melvin P. Heller and Ed. T. Rancic, "Open Classrooms Need Open Minds," Momentum, 4 (February, 1973), p. 37.

[3]Rose Sabaroff and Mary Ann Hanna, The Open Classroom, (Metuchen, N. J.: The Scarecrow Press, Inc., 1974), p. 1.

[4]Children and Their Primary Schools - A Report of the Central Advisory Council for Education (England), Bridget Plowden, chairman (London: Her Majesty's Stationery Office, 1967).

[5]Mary Brown and Norman Precious, The Integrated Day in the Primary School (New York: Agathon Press, Inc., 1969).

Silberman[6] favored the British system for use in American classrooms. Kohl[7] told of his own use of the system known as the "open classroom." Whenever "open" is to be used in this study to express the concept of the psychological status of student-teacher-subject interaction, it will always be followed by the word "classroom." This study is looking at open space facilities with no requirement that any class be an open classroom in the psychological sense stated above.

A third definition of "open" to be used in this study is that of "open climate" or the "openness" of a school. This comes from a description of the manner in which the teachers and the principal interact with each other in normal everyday activities. An open climate may possibly occur in traditionally constructed schools, but the American Association of School Administrators stated that an open climate will certainly occur in open space schools: "The very organization of an open space school creates a cooperative spirit between and among staff members in planning, presenting, and evaluating instruction."[8] Staples, describing the unique position of principals of

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[6]Charles Silberman, Crisis in the Classroom (New York: Random House, 1970).

[7]Herbert R. Kohl, The Open Classroom (New York: Random House, Inc., 1969).

[8]AASA Commission, op. cit., p. 25.

open space schools in dealing with their teachers, agreed with the AASA that an open climate should exist. Staples predicted that in open space "Teachers must be treated with 'openness.' They must be fully cognizant of all aspects of the program and must be regarded as the leaders in program development."[9] Additional aspects of open climate will be explored in the next chapter. Evidence from several researchers will be presented to reinforce the opinion that teachers of open space should reflect trust and cooperation. The teachers, personally, should be open and communicative with each other. As a group they should stimulate a climate in the school that is conducive to "openness." The effect of their interaction sets the atmosphere and tone of the school, the organizational climate.

Several reasons have been put forth in response to the question: Why open space? Four reasons shall be listed.

One - Curricular needs. The implementation of an individualized curriculum can best be met within the flexibility provided in an open space setting. Breznik described the situation at the Apollo School in Bossier City, Louisiana: "The strategy in the building of Apollo was in reverse order to the usual way schools are built.

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[9]I. Ezra Staples, "The Open-Space Plan in Education." Educational Leadership, 28 (February, 1971), p. 463.

first the curriculum was planned in every detail - then a building was wrapped around the package."[10]

Two - Effective use of personnel. An open space facility enhances the opportunity for sharing the strengths and competencies of experienced teachers. As an example, Martin G. Atkins, former superintendent of schools at Carson City, Michigan, explained his situation:

> It was strongly felt . . . that a need prevailed to capitalize upon the teaching strengths of existing classroom personnel. It seemed logical that utilizing what expertise we had among our staff with as many kids as possible required an open-space facility along with a curriculum that matched. The idea was conceived --not to cut costs--but in an endeavor to produce the best delivery system that our limited resources would permit.[11]

Three - Cost control. The American Association of School Administrators found that open space schools cost less to construct than the traditional egg-crate schools. One reason for this dollar savings is that open space facilities require fewer square feet of space. In such facilities the amount of useable space is a much larger percentage of the gross area, thus yielding more useful space per dollar of expenditure.[12]

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[10]Roy Breznik, "Venture into Open Space Learning." A V Guide, 51 (May, 1972), p. 5.

[11]Personal letter received from Martin G. Atkins, Superintendent, Bridgeprot-Spaulding Community Schools, Michigan, October 16, 1978.

[12]AASA Commission, op. cit., p. 44.

Four - Commitment to change. The design of an open space facility allows daily flexibility for the movement of students as well as for rearrangement of furniture. This flexibility has long range potential. The AASA report stated this potential:

> Open space schools represent a commitment to the belief that education is dynamic--that change is inevitable. . . . Whether traditional or way out, the program is bound to change. When it does, so will the school, painlessly and economically, for that is the heart of the open space concept.[13]

Four dimensional criteria are to be used to identify the open space concept in existing physical facilities. The criteria have been established to reflect a consensus of research in the educational literature.

The first dimension is the existence of large open space areas with inherent flexibility of movement. This is the heart of the open space concept, but by itself is not enough. Freedom of movement must not be inhibited by artificial barriers. Heller and Rancic warned of this practice:

> One obvious physical indication that the open [space] classroom is not truly open is the appearance of teacher-made walls--chairs, carts, boxes, shelving, portable chalkboards, storage cabinets, and other barriers--which divide the large space into sections. When movement from section to section by teacher or student is tantamount to entering alien territory, the open space is no more.[14]

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[13]Ibid., p. 17.

[14]Heller and Rancic, op. cit., p. 37.

Significantly, the first and foremost dimension of the open space concept is the abundance of open space that permits flexibility of movement.

Flexibility for both academic and physical movement is enhanced by the existence of open space. Consequently, student mobility is the second dimension of the open space concept. Open space flexibility calls for programming that takes advantage of the opportunity for movement. Farmer and Weinstock, in their review of Schools Without Walls, proposed that:

> . . . the primary benefit an open (space) classroom setting offers children is the freedom to move from group to group for different levels of work. This mobility is important not only academically, but physically and psychologically as well.[15]

Movement from center to center may occur individually, or in groups. Such movement can occur daily or at various intervals during the week. Another type of movement, made simple by open space, is that of academic placement. With so great a number of children concentrated in a single room, and with a large reservoir of teaching talent available in the same space, the logistics of tailoring instruction to the needs of the individual child are greatly simplified. Farmer and Weinstock considered proper placement for each child a simple matter in open space:

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[15]Margaret Farmer and Ruth Weinstock, Schools Without Walls (New York: Educational Facilities Laboratories, 1965), p. 53.

> However uneven his attainments, there is a group within the open room working on his level in each subject, and a teacher to go with it. If he is a slow learner, he may stay with the same group for months. If he learns rapidly, he can move from week to week to a group at a more advanced level of achievement. When he moves, the move is an easy one: around a cabinet or across to another cluster of pupils a few yards away. There is no need to adjust to a new teacher, new classmates, a different room.[16]

The third dimension concerns easy and frequent communications between open space occupants. Mobility of students offers frequent opportunity for student-student and student-teacher contact. However, equally important for success in open space schools is teacher-teacher contact. Teachers in open space should be treated and treat others with openness. Staples, listing three conditions for achieving openness, felt that: ". . . to have integrity 'openness' must be characterized by approachability, relaxed and informal control, ease of communications."[17]

The fourth dimension of the open space concept concerns teacher planning as a cooperative venture. For teachers in open space, openness means more than simply communicating with others. The proximity of one teacher to another demands that each member of the teaching team become aware of all aspects of the total school program. Teachers need to have a hand in long range planning as well

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[16]Ibid., p. 5.

[17]Staples, op. cit., p. 458.

as daily planning. Teachers need to participate regularly in decision making. Cohen,[18] studying teacher feelings in open space schools, linked increased decision making powers to job satisfaction. She reported that teachers who were a part of active teams felt their role was highly influential and rewarding. They considered this activity a source of professional growth and a step toward improved job satisfaction. Agreeing with this view, a recent study by Seidner and associates confirmed that: ". . . teachers in open-space schools seem to feel somewhat more satisfied with their jobs than teachers in conventional schools do."[19] Since teacher job satisfaction depends on teacher input and team openness, then teacher planning and cooperation form another dimension of the open space concept.

The dimensions of the open space concept, as stated above, are summarized as follows:

1. An abundance of open space exists with its inherent flexibility of movement;
2. Flexibility in grouping permits student mobility;
3. Communication between open space occupants is easy and frequent; and
4. Teacher planning is a cooperative venture.

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[18]Elizabeth G. Cohen, "Open-Space Schools: The Opportunity to Become Ambitious," Sociology of Education, 46 (Spring, 1973).

[19]Constance J. Seidner, Sally C. Lewis, Noel V. Sherwin, and Enid W. Troll, "Cognitive and Affective Outcomes for Pupils in an Open-Space Elementary School: A Comparative Study," The Elementary School Journal 78 (January, 1978), p. 209.

The open space concept requires an organizational style effectively managed by the building principal. The effectiveness of any organizational style is dependent upon the leadership, skills, and abilities of the manager. The responsibilities of the building principal are defined by law since the State School Code directs the principal to assume:

> . . . administrative responsibilities and instructional leadership, under the supervision of the superintendent, and in accordance with reasonable rules and regulations of the board, for the planning, operation and evaluation of the educational program . . .[20]

The style of leadership of each principal may vary from task orientation - caring only to get the job done - to relationships orientation - caring for the people who must do the work. Reddin, researching the effectiveness of managers, considered these styles as independent of one another rather than polar opposites. He stated that in certain situations the manager who aimed for task completion would be effective, while in other situations if he attended to developing satisfactory relationships he would be equally effective. Neither style is "right" or "wrong," since the measure of effectiveness comes from using the right style in the right situation.[21]

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[20] The School Code of Illinois, 1977, Article 10, Section 21.4a.

[21] William J. Reddin, Managerial Effectiveness (New York: McGraw-Hill Book Company, 1970), p. 139.

The amount of satisfaction teachers derive from effective leadership gives rise to the concept label, organizational climate. Halpin and Croft have described the organizational climate of a school as the "feel" of the place.[22] They explain that any administrator or teacher can feel the difference as he moves from one school to another. A teacher exclaims "This feels like a nice place to work," in one school or "I can feel that the principals and teachers hate each other's guts," in another. Halpin and Croft developed categories of climate ranging from a closed climate - when leadership is domineering, exercising great control - to an open climate - when job satisfaction and trust in the leadership are both rated high.[23]

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[22]Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (Chicago: Midwest Administration Center, 1963), p. 4.

[23]Ibid., pp. 61-66.

PURPOSE OF THE STUDY

The purpose of this study is to compare leadership styles of principals with factors of organizational climate of selected suburban open space elementary schools. A study of the literature yielded several dimensions of acceptable use of open space. Teachers and students, placed in close proximity to each other, required an openness in situations unique to open space. Similarly, the principals of open space facilities viewed their positions as dependent upon how their staff affected their style of leadership.

This study will investigate the effectiveness of the principal's leadership style in the situation of a school operating under the dimensions of the open space concept.

Attention will be focused on task orientation and relationships orientation as leadership styles practiced by open space principals. Aspects of leadership control, teacher attitude, and job satisfaction will be examined as measures of organizational climate.

The need for a definitive study comparing styles of leadership with climate conditions in open space schools is apparent from the lack of previous research and reports on the subject.

METHODS AND PROCEDURE

In order to determine the relationships between styles of leadership and organizational climates in open space suburban elementary schools, the following hypotheses were formulated for investigation in this study:

I. Principals of open space schools are more concerned with relationships orientation than with task orientation.

II. The leadership style of principals in open space elementary schools is equally distributed among eight categories: executive, benevolent autocrat, bureaucrat, developer, compromiser, autocrat, missionary, and deserter.

III. Principals of open space elementary schools select a less effective leadership style as often as a more effective style.

IV. Principals of open space elementary schools display a high concern for relationships orientation when the members of their staffs show high satisfaction in their individual attitudes toward the organization.

V. Principals of open space elementary schools possess a high concern for task orientation when their staffs indicate a dependence on a high level of direction and control.

VI. In open space elementary schools, principals show a high level of managerial effectiveness when their staffs display high satisfaction with both job and leadership.

Task orientation, relationships orientation, leadership styles and effectiveness are measurable by means of the Reddin Management Style Diagnosis Test. (See Appendix C.) Leadership control, teacher attitudes, and job satisfaction

are aspects of school climate measured by the Halpin and Croft Organizational Climate Description Questionnaire. (See Appendix D.)

The present study was conducted in twelve elementary schools which were identified by their principals in 1973 as open space schools and further identified in 1978 as meeting the criteria of the open space concept established by this study. (See Appendix E.) These schools are located in ten widely separated suburban school districts in the Northeastern counties of Illinois. The total population of students is in excess of 5600 with individual schools varying from 330 to 685 students.

During the principals' interview, the Principal's Personal Inventory (see Appendix A), as well as the Reddin Management Style Diagnosis Test were completed. The 174 teachers participating in the study completed the Teacher's Personal Inventory (see Appendix B), and the Halpin and Croft Organizational Climate Description Questionnaire. The Inventories were used in the interpretation of data collected from the Test and Questionnaire.

This study has been concerned with those schools which have been operating in open space for at least five years and are still functioning in accordance with the four dimensions of the open space concept.

LIMITATIONS AND DELIMITATIONS

It is not the purpose of this study to prove that one style of leadership is more productive than another, or that one climate is desireable in all schools. Rather, it examines relationships and correlations between particular leadership styles and specific aspects of organizational climate.

The sample population was limited to elementary schools that had both primary and intermediate programs. Junior high and high schools were not considered. All schools were from the public sector.

Schools built after 1973 were not in the sample since such new schools need time to develop a program of their own. Similarly, in such schools with "growing pains," a meaningful climatic relationship would require sufficient time to evolve.

The study does not use schools from highly populated urban areas. City schools usually embody a considerably larger student population with its larger teaching staff as compared to suburban counterparts. Also, urban schools often have less freedom for voluntary teacher movement than do suburban schools, automatically skewing measurement of job satisfaction. The need to consider such extraneous yet contributing factors was purposely and carefully avoided.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

INTRODUCTION

A review of the literature indicates a common thread running through open space elementary schools: people treat each other with an openness that exemplifies a substantially open type of climate and a style of leadership that is relationships oriented. This chapter will include a summary of the research relating types of leadership behavior with variations of climate concepts and the relationships of these with open space schools.

OPEN SPACE SCHOOLS

The first of the open space schools to gain national prominence were built at Carson City, Michigan, in 1957; at Chagrin Falls, Ohio, in 1961; and in 1964 at San Jose, California. The step-by-step story of the construction of the Lewis Sands Elementary School at Chagrin Falls is a typical tale of open space development and is aptly told by Farmer and Weinstock:

> Outside the schoolhouse, experiences with open space are commonplace. The bank customer transacts his confidential business with one of the 10 officers in an executive bull pen while all around him other officers at their desks frown over stacks of paper, murmur into dictaphones, or confer confidentially with other clients. Typewriters clatter, telephones ring, people come and

> go. But none of this is particularly disturbing. It is just the expected background for the activity at hand. The same phenomenon occurs in large offices, in public waiting rooms and lobbies, and in restaurants.
>
> In fact it was the comparative privacy found in a crowded restaurant that inspired the development . . . of a completely open four-classroom addition to the ungraded Lewis Sands Primary School in Chagrin Falls, Ohio. . . . Dr. Robert M. Finley, then superintendent of schools at Chagrin Falls . . . tells the story . . .[1]

The story that Dr. Finley told began in the busy restaurant where he and the architects discussed plans for the new school with members of the board. During the course of the evening, Dr. Finley suddenly realized that despite the clutter of dishes, the sound of background music, and the hub-bub of talking in the big room around them, none of them were disturbed by the noise. Since the district had money problems, Dr. Finley proposed that they save money by eliminating interior partitions in the new school. Assured by architects that the proposal was sound, he worked out a new educational program to fit the new open space. Eliminating the interior partitions and introducing movable furniture was as educationally successful at the Lewis Sands School as it has elsewhere.

At Carson City, Michigan, the need for a larger elementary school building coincided with the need for a larger teaching staff - this at the time of a country-wide

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[1]Margaret Farmer and Ruth Weinstock, Schools Without Walls (New York: Educational Facilities Laboratories, 1965), pp. 11-12.

teacher shortage. Superintendent Atkins solved his problem by planning large open areas which would accommodate four teachers and classes at the same time. In this setting neophyte teachers could find an experienced helping hand close by. Ms. Elizabeth Martin, principal at the Carson City Elementary School from 1960 to 1973, reported on the school's popularity in the early 1960's: "We were visited by representatives from Chagrin Falls and just everywhere."[2] Carson City may have set a pattern for new schools in every state of the country. Many other schools began to modify their existing structures by building open space additions.

The "big room" at the Dilworth School in San Jose, California served as a bridge from converted egg-crate schools to the completely open space pods of new schools. In the old Dilworth School, team teaching took place in the neighboring classrooms which were connected with operable partitions. National recognition was achieved by the team that worked in the "big room," the new addition stretching free and clear for 3,840 square feet. Farmer and Weinstock lauded the Dilworth program:

> But if size is the first impression made by the big room, the more enduring impression is one of vitality and esprit de corps. "This is not a classroom," one visitor noted. "It's a community."[3]

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[2]Personal interview with Elizabeth Martin, at Carson City, Michigan, October 9, 1978.

[3]Farmer and Weinstock, op. cit., p. 7.

"Classroom communities" have been housed in new buildings, rehabilitated old school buildings, and even in specially converted factory buildings. Pasnik showed how P.S. 211, in Bronx, New York City, came to be operative in less than six months at a cost of less than one-third that of a newly constructed building. According to Pasnik, this converted factory fulfilled an important, primary concept of open space schools by furnishing ". . . flexible learning areas to provide space for individual study, small group activities, large group lectures, and teacher planning."[4] Although converted factories made for interesting articles, most studies concerning open space have concentrated on new construction. In several cases school officials have shown a preference for a design which allowed for the installation of movable partitions between open areas. Burnham recounted his reasons for such preference after studying open space schools in York County, Ontario, Canada. Burnham found that some schools purposely developed a design that included movable partitions as ". . . a hedge against the possibility that the open plan philosophy is not well suited to some learners all the time or all the learners some of the time."[5]

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[4]Marion Pasnik, "Factory Building to Modern School in Six Months," School Management, 15 (July, 1971), p. 12.

[5]Brian Burnham, A Day in the Life; Case Studies of Pupils in Open Plan Schools (Aurora, Ontario, Canada: Research Office, Division of Planning and Development, York County Board of Education, 1970), p. 5.

Recognizing the need for flexibility in the use of space, many second-generation open schools have planned for operable walls to partition at least one teaching station within the big room. Farmer and Weinstock found this idea especially useful for immature first graders who ". . . do not respond to the movement and stimulation of a big room and need the calm of a separate place."[6] Other schools, constructed with half-length walls between adjoining rooms, partially divided the space but left huge gaps opening into a central area available for large group meetings. Such permanent, immovable half-walls did not diminish the open space concept when taken together with other open space dimensions. Summing up the situation in a few words, the Educational Facilities Laboratories explained:

> There is nothing inviolable about open space, isolating part of it for sound reasons reflects man's territorial imperative; but the large open space has to exist in the first place so that irregular areas of various sizes can be carved out.[7]

The use of open space may vary from school to school. However, certain common practices have been found to appear with regularity in the literature. The program at the Apollo School in Bossier City, Louisiana has been described by Breznik. He found that Apollo satisfied the demands of teachers for a non-graded, continuous progress program, by

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[6]Farmer and Weinstock, op. cit., p. 41.

[7]Five Open Plan High Schools, Report from Educational Facilities Laboratories (New York: EFL, Inc., 1973), p. 6.

scrapping time schedules and monitoring bells, flexibility was built into time as much as into space. Flexibility in scheduling went hand-in-hand with flexibility in grouping, an important dimension of the open space concept. However, regrouping required undesired schedule coordination among team teachers.[8]

Farmer and Weinstock have pointed to disadvantages of such scheduling:

> . . . the loss of flexibility of time, inherent in a schedule, means spontaneity is sometimes sacrificed. A group cannot pursue a spur-of-the-moment enthusiasm or enjoy the prolongation of a hot discussion . . . because to do so would impinge on the preplanned activities of others. Upon reflection, however, . . . it may be easier to work out quick, off-the-cuff changes when team members are gathered in a single place where communication between them is informal and casual.[9]

Easy communication among team members is another accepted and important dimension of the open space concept.

A related aspect of communication was found to exist by Wing and Mack when New Hampshire's first open space school was opened: "Interpersonal relationships were our biggest hang-up - teacher-to-student as well as teacher-to-teacher."[10] In the first year of this new school, the principal and staff worked out a communication network that included teacher time

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[8]Roy Breznik, "Venture into Open Space Learning." A V Guide, 51 (May, 1972), p. 5.

[9]Farmer and Weinstock, op. cit., p. 39.

[10]R. Cliff Wing and Patricia H. Mack, "Wide Open for Learning," American Education, 6 (November, 1970), p. 13.

for the planning and critiquing of the teacher-learning process. Because of the proximity of teachers and students, whimsical desires had to be contained for the good of the neighboring groups. Ongoing communication throughout the day, among team members, required careful programming with team teaching superseding individual desire.

Successful team teaching has found a place in the caracole-shaped (a snail-like spiral) Valley Winds School in St. Louis County, Missouri. Koch, the school principal in 1969, wrote a position paper on the first thousand days of operation. In his paper, Koch explained the team's operational process. His teachers chose a team chairman ". . . on a rotating basis for a period of time. . . . This is not team teaching in the sense of one master teacher supervising and directing but rather a sharing and cooperative venture."[11] Such cooperative planning among teachers has been expressed throughout the literature as a common need of open space schools.

As can be expected, not all teachers are satisfied with open space placement. In fact, not all teachers can adapt to open space. Some teachers, who have had all their experience in traditional classrooms, simply cannot accept the responsibility that comes with being a team member. The

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[11]LeRoy F. Koch, Jr., "1000 Days of a New Elementary School," Report of the Valley Winds Elementary School, St. Louis County, Missouri, 1969, p. 8. (Mimeographed.)

Educational Facilities Laboratories identified this as a real loss: "In some open plan schools teachers operate more or less in the same way that they did in traditional classrooms, thereby leaving untapped the potential resources of open academic areas."[12] Teachers, unhappy in open space, should return to self-contained classrooms.

Opponents of open space have complained that too much noise is caused by frequent movement of students. The problem has been shown to need a physical solution. One proposal, recommended by Kingsbury, suggested acoustical treatment for open classrooms:

> In these spaces, the problem is to try to restrict the speech signal to a small area. Ideally, the speech signal should be intelligible at the furthest student position in one class segment, and inaudible, or at least unintelligible, at the closest student position in the next segment.[13]

The physical solution to the noise problem is evident in open space schools: absorptive carpeting on the floor and a full ceiling of highly absorptive acoustical tile. The grating sound of moving student desks and chairs is often eliminated by simply eliminating individual student desks. In their place, the open space areas containing tables and work benches. Often, even the chairs are gone, requiring children to position themselves on the carpeted floor. This

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[12] Five Open Plan High Schools, EFL., p. 47.

[13] H. L. Kingsbuty, "Acoustics in the Changing Classroom," Educational Technology, 13 (March, 1973), p. 63.

practice is readily accepted by the students. Any parent of children aged six to sixteen knows that this is a normal position for studying at home, so why not in the classroom?

Despite the attention paid to acoustics in open space schools, visitors still consider the active hub-bub brought about by student interaction as disturbing noise. Breznik found this to be the foremost concern among those visiting the Apollo School. His response correlates with responses from administrators in other open space schools. Breznik claimed:

> If you would rank all of Apollo's problems from one to 50 on a scale, noise wouldn't even be on the scale. This school without walls to bounce sound and hard floors to reflect it, is the quietest in our system - we ran a study to prove it.[14]

Although such positive statements, indicating noise is not a serious problem in open space schools, alleviate a major concern, the projection of sound to allow for effective communication still remains as a matter of special interest. Frazier issued a warning concerning communication difficulty in open space schools: "With their light voices, a group of children simply cannot interact well in the large open spaces now in vogue, despite the claims of acoustical engineers."[15] Frazier recommended two alternatives. The first was to

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[14]Breznik, op. cit., p. 8.

[15]Alexander Frazier, Open Schools for Children (Washington, D. C.: Association for Supervision and Curriculum Development, 1972), p. 21.

provide an adjacent or satellite room for special activities. The second was that teachers reduce group instruction and move toward more independent study.

Many doubts about the use of open space schools were encountered by Roper and Nolan when they began to prepare junior high teachers for the move into an open facility. Teachers complained about the potential noise levels and possible disturbances due to student movement. They added two other problem areas: quiet and shy children would get lost in crowds of a hundred or more, and lively debates or panel discussions would have to be avoided in order to not disturb neighboring groups and teachers. In visits to a wide range of open space schools in the San Francisco Bay Area, the researchers found some teachers had solved these problems by closing off the open areas with portable walls, coat racks, book cases, or other temporary facilities. Roper and Nolan could not accept this as a solution giving the following explanation for walls going up: "During our field visits we found that faculties with little preparation for open spaces were usually the first to put up walls."[16] Roper and Nolan's recommendation for removing doubts related to open space was close teacher cooperation. According to their report the teachers who functioned successfully in

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[16]Susan Stavert Roper and Robert R. Nolan, "How to Survive in the Open Space School," The Clearing House, 51 (February, 1978), p. 297.

open space schools have done so because of their agreement on five basic principles:

(1) developing and enforcing standards for student behavior;
(2) agreeing on student movement patterns;
(3) scheduling activities to minimize noise;
(4) arranging furniture, equipment, and supplies;
(5) involving parents.[17]

The underlying concepts of these principles are communication and cooperation among all involved, members of the team, students, parents, and the administration.

While cooperation might reduce distracting noise, Seefeldt saw danger in any regimentation stating that it would negate the very freedom that open space was designed to foster. Each child, she warned, rather than being free to select his own learning activities, would be tightly bound to the group and rigidly programmed for all activities. She further objected to the so-called practice of providing for individualization since she felt that "Learning stations, designed to meet individual differences and foster exploration with various materials, have evolved into a paper and pencil experience."[18] Seefeldt feared that such severe regimentation was counter-productive, developing intellectual servility in a child who would eventually respond only to authoritative direction. She felt all open space classrooms

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[17]Ibid.

[18]Carol Seefeldt, "Open Space - Closed Learning?" Educational Leadership, 30 (January, 1973), p. 356.

should be open classrooms in the sense of the British Primary Schools.

Lloyd Duck proposed even greater freedom for those students who are enrolled in secondary schools. He would involve students as part of the team along with teachers to plan an updated core curriculum. The resulting course of study would not be tailor made for students, but would be prepared with the students. Duck's planning would involve pupils who could ". . . distinguish between 'relevant' and 'irrelevant' utopias because futurists say we have to choose between utopia and oblivion."[19] Listing the dimensions of the open space concept indicates that the stronger the development of this concept the closer one gets to the British type open classroom.

The dimensions of the open space concept, as implied throughout the literature, are as follows:

(1) An abundance of open space exists with its inherent flexibility of movement;
(2) Flexibility in grouping allows student mobility;
(3) Communication between open space occupants is easy and frequent;
(4) Teacher planning is a cooperative venture.

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[19]Lloyd Duck, "Pupil-Teacher Planning in 'Open-Space' Secondary Schools," Education, 98 (March-April, 1978), p. 301.

LEADERSHIP STYLES

Schools utilizing the open space concept are as much in need of leadership and management as any others. The style of leadership demonstrated by the manager of an open space school is a contributing factor to its organizational climate. Before any connection between the two can be explored, each topic must be studied separately. Hence, an historical review of management and leadership will precede the study of organizational climate. Relationships with open space schools will be stated as applicable.

The first studies of leadership styles, appearing in the early 1900's, paid little attention to the feelings or relationships between manager and worker. The intent of these studies was to organize the body of knowledge that was available regarding techniques of leadership. Early studies on leadership behavior were conducted almost exclusively in non-school environments. For example, Taylor, an American engineer, applied the scientific method to the study of factory production. He developed an orderly set of principles which could replace the trial and error methods in use in 1911. One of these principles demanded greater output from each employee. Taylor, as gang boss, dealt with the workmen by instilling fear and imposing fines on those who shirked their duties. In spite of his many attempts, he found it extremely difficult to make people

work against their wills.[20] Nevertheless, he persisted in developing his five point system for managerial control: a) work study, to eliminate all false moves; b) selection and training of workers, to fit the man to the job or a job for the man; c) standardization of tools, to satisfy the needs of specific jobs; d) supervision and planning, to divide the task of foremanship into separate duties and acts; e) payment in accordance with output, to be based on the individual's performance. Many employees were not happy with Taylor's system. Gross, reviewing the early studies in leadership, reported opposition to Taylorism:

> As already pointed out, Taylor's methods were often resented by foremen and gang bosses. But this resentment was not limited to the lower levels of management. The higher ranks also took umbrage. They did not appreciate his scornful comments on "rule of thumb" methods. Those who had fought their way to high managerial positions without the benefit of higher education were sensitive to Taylor's stand that unless assisted by highly trained experts, they were unqualified to manage.[21]

While Taylor developed his approach to management by beginning with the man at the bench or the lathe and then moving upward, Fayol, a French engineer, initiated his approach to the study of administration by focusing on the man at the top. Based on his successful experience

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[20]Irving Fisher, "Scientific Management Made Clear," in Classics in Scientific Management ed. by Donald DelMar and Roger D. Collins (University, Alabama: The University of Alabama Press, 1976), p. 157.

[21]Bertram M. Gross, The Managing of Organizations (New York: The Free Press of Glencoe, 1964), p. 125.

saving a mining company from bankruptcy, Fayol, in 1916, defined administration in terms of five elements: to to plan to organize, to command, to coordinate, and finally to control.[22] Gross contended that Fayol had never considered administration to be an exclusive privilege nor a special right limited to the senior staff of an organization. Gross agreed with this concept when he stated:

> It is spread throughout an organization. Even workers may participate to some degree in administrative activities. As one goes up the "scalar chain" of an organization's hierarchy, the relative importance of administrative responsibility and administrative ability increases.[23]

Sixty years ago Fayol had already introduced into the study of administration concepts similar to those which are currently under study in the literature related to open space schools. Followers of Taylor who were technically competent, produced sophisticated techniques for analyzing work procedures, production methods, cost accounting, and the selection of employees. At the more general level, Fayol's elements were developed into organizational principles. Gulick and Urwick advanced the study of leadership styles when their famous Papers on the Science of Administration was published in 1937. They expanded Fayol's elements to: planning, organizing, staffing, directing, co-ordinating,

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[22]Ibid., p. 129.

[23]Ibid.

reporting, and budgeting. These elements described the work of the chief executive.[24]

In addition, the Gulick-Urwick POSDCORB model lead to eight organizational principles: a) fitting people to structure, the right person in the right job; b) one top executive, or, don't rule by committee; c) unity of command, since a man cannot serve two masters; d) staff, special and general, so the topmost executive can get help; e) basis of subdivision: process, purpose, persons or things served, or place of work; f) delegation, to give the responsibility to do what must be done; g) matching responsibility with authority, since accountability demands it; and h) span of control, since no one can supervise directly the work of more than six subordinates.[25]

While these elements and principles from Gulick and Urwick described what a manager would find in an organization, they did not describe the manager himself. Research relating to leadership styles in the early 1900's dealt only with the organization as an entity rather than with the people who staffed it. This view also prevailed in schools. Pupil progress was compared with factory output when Babbitt related educational practice to industrial process:

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[24]Luther Gulick and Lyndall Urwick, eds., Papers on the Science of Administration (New York: Institute of Public Administration, Columbia University, 1937), p. 13.

[25]Gross, op. cit., pp. 145-148.

"Education is a shaping process as much as the manufacture of steel rails, the personality is to be shaped and fashioned into desirable form."[26] Students, compared to laborers, were to be treated as so many well-oiled machines ignoring their basic humanity.

The human relations approach to leadership began when a group of researchers from Harvard University was invited to conduct studies at the Chicago Hawthorne Plant of Western Electric. These classic studies were conducted between 1927 and 1932 by Roethlisberger and Mayo. The researchers experimented with changes in the length of the work day, rest periods, and other incentives that would appeal to the workers. They found production increased. When these incentives were removed, production continued to increase. Surprisingly, a control group that experienced neither changes nor incentives also increased its rate of production. Gibson, Ivancevich, and Donnelly, in their book on organization, analyzed the results of these experiments and reported: "The researchers hypothesized that the increases in output . . . were the result of the changed social situations of the workers in their satisfaction,

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[26]Franklin Babbitt, "The Supervision of City Schools," Twelveth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1913), p. 12.

motivation, and changed patterns of supervision."[27] A second phase of the Hawthorne study recorded group behavior. The researchers found that informal work groups often had established their own production norms which were somewhat in conflict with those set by management. Gibson and his associates summarized their findings as follows:

> This phase of the study indicated the strength of social organization upon the individuals. The social organization was based upon attitudes and sentiments which were often not related at all to formal organizational policies. In other words, the entire group of studies indicated that social and psychological factors were of major importance in determining . . . production and satisfaction of workers.[28]

Much work in leadership research in the 1940's and 1950's was directed toward isolating the characteristics of leaders. This was based on the assumption that specific traits of effective leaders could be identified. Success or failure of candidates for positions of leadership could be predicted depending on traits linked to them. Gibson and his associates reviewed these theories with little enthusiasm. They could accept the trait approach as valid but warned that ". . . the comparison of leaders by various traits has resulted in little agreement among researchers."[29]

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[27]James L. Gibson, John M. Ivancevich, and James H. Donnelly, Jr., Organizations: Structure, Process, Behavior (Dallas: Business Publications, Inc., 1973), p. 255.

[28]Ibid.

[29]Ibid., p. 294.

Reddin's study gives credence to this view. He dismissed personal and professional traits from his study of managers because: "It is not the idea of traits that is wrong, but rather the absence of a theory to show which traits are important for particular managerial situations."[30] Stogdill, examining an extensive collection of research studies, decided that there was more to leadership than traits. He stated:

> The findings suggest that leadership is not a matter of passive status or of the mere possession of some combination of traits. It appears rather to be a working relationship among members of a group, in which the leader acquires status through active participation and demonstration of his capacity for carrying cooperative tasks through to completion.[31]

Since leadership is more than a combination of innate traits, its effectiveness must also come from external conditions. Two approaches, motivational theory and situational theory, must be considered in relation to this concept.

Leaders need to affect and motivate their followers. Such influence varies with the situation in which the leader and follower roles occur. Maslow, in the 1940's and 1950's, set forth a theory of human motivation which correlated a number of separate propositions. Maslow's theory remains

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[30]William J. Reddin, Managerial Effectiveness (New York: McGraw-Hill Book Company, 1970), p. 20.

[31]Ralph M. Stogdill, Handbook of Leadership (New York: The Free Press, 1974), p. 65.

popular among those who see human needs as important in energizing and directing behavior. Maslow assessed the personal needs of a typical individual and positioned them in a hierarchical order. Figure 1 depicts this as a six step pyramid. The most basic needs are at the bottom. Not a single need above any other receives proper attention until the needs below are satisfied.[32] A manager, wishing to be effective while operating within a relationships orientation, must attempt to satisfy the needs of those he manages as well as satisfying his own needs. He is most likely to be able to meet the needs of employees at the bottom levels of the pyramid while at the same time striving to satisfy his own needs at the very top of Maslow's pyramid. His effectiveness will depend upon the situation in which he operates.

William J. Reddin has been a strong proponent of this situational theory since he developed his "3-D Theory of Leadership Effectiveness." The three dimensions he has proposed are: 1) task orientation, getting the job done; 2) relationships orientation, showing concern for those who do the job; and 3) effectiveness, how good a job a leader can do depending upon the situation. Reddin's theory was patterned on a common thread that was woven through three extensive leadership studies conducted at the University

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[32]Abraham H. Maslow, Motivation and Personality (New York: Harper & Brothers, Publishers, 1954), pp. 80-97.

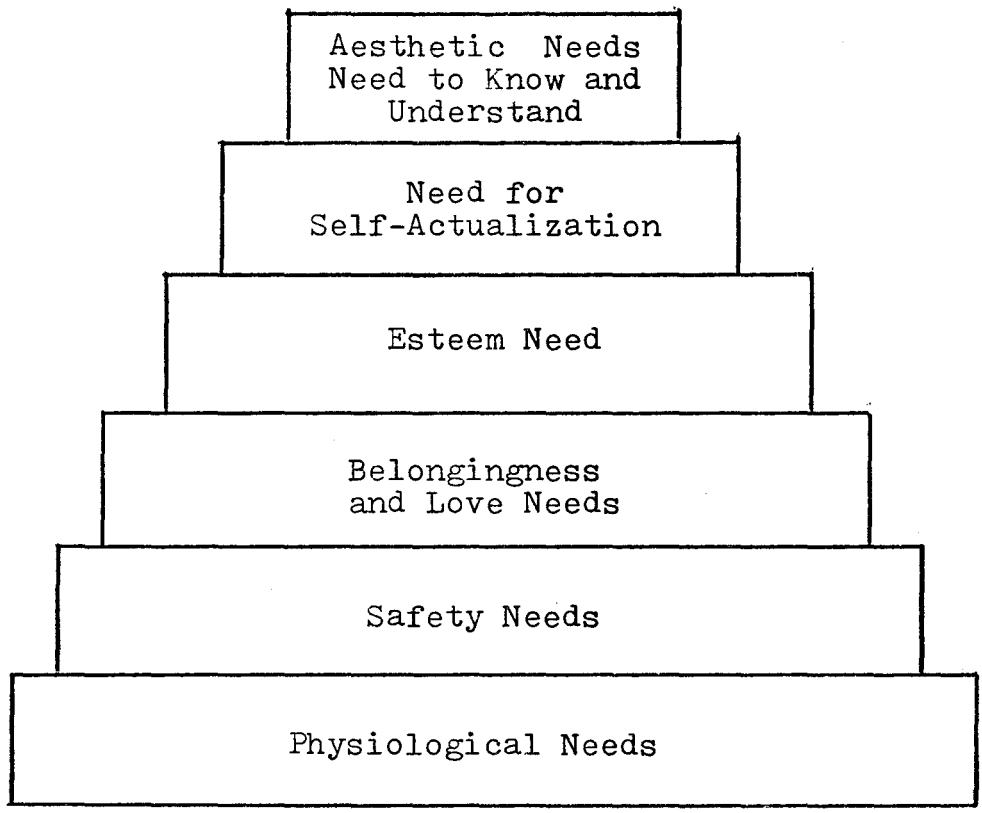

Figure 1. Maslow's Hierarchy of Needs.

From: Abraham H. Maslow, Motivation and Personality

of Michigan, at Ohio State University, and at Harvard University.[33]

In the 1940's and 1950's the Ohio State study proposed that leadership behavior could be classified into two independent factors: initiating structure and consideration. The first concerns planning as well as organizing work tasks. The second is the maintainence of relationships.

The University of Michigan's Survey Research Center developed the Michigan style continuum. It pictured a manager walking a line between two extremes: one, worker-centered, the other, production-centered. While it was at first proposed that a manager could not be at both ends simultaneously, Michigan modified its views in subsequent years and came to see these as independent variables in the same fashion as the Ohio State study.[34]

The studies at Harvard concentrated on small-group behavior. Bales discovered that in such small groups, two different kinds of leaders emerge. One of these, called the task leader, is characterized as offering suggestions and leading the conversation. The other kind, called the socio-emotional leader, offers psychological support to others making it easier for them to talk.

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[33]Reddin, op. cit., pp. 20-24.

[34]Robert L. Kahn, "Productivity and Job Satisfaction," Personnel Psychology 13 (Fall, 1960), p. 282.

Reddin chose the simple word "task" to represent the idea inherent in the concepts contained in "structure," "production-centered," and "task leader." He also chose the word "relationships" to represent the idea contained in "consideration," "employee-centered," and "socio-emotional leader." The common thread which runs through these two concepts is evident when they are represented in tabular form in Figure 2.[35] Reddin defined these factors as:

Task Orientation (TO) The extent to which a manager directs his own and his subordinate's efforts, characterized by initiating, organizing, and directing.

Relationships Orientation (RO) The extent to which a manager has personal job relationships; characterized by listening, trusting, and encouraging.

Based on these two leadership factors, Reddin developed leadership styles organized into two categories, four basic and eight specific styles. These will be discussed after a brief presentation of several classification systems that Reddin considered before he designed his own.

One such system for classifying leadership styles was established by Douglas McGregor. In his approach, McGregor developed his Theory X and Theory Y model[36] to explain the different ways managers view the working force. Theory X depicts the traditional image of a leader directing

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[35]Reddin, op. cit., p. 23.

[36]Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, Inc., 1960), p. 132.

Reddin	Task	Relationships
Ohio State	Structure	Consideration
Michigan	Production-Centered	Employee-Centered
Harvard	Task Leader	Socio-Emotional Leader

Figure 2. The common thread running through leadership research studies.

From: Reddin, Managerial Effectiveness, p. 23.

and motivating workers who have little ambition, dislike work, and prefer the security of simply following directions. Theory Y accepts each worker as able to exercise self-control and self-direction in the service of objectives to which he is committed, even if these are organizational not personal goals. This worker possesses a relatively high degree of imagination, ingenuity, and creativity in the solution of organizational problems. According to McGregor, the man with Theory Y qualities is widely distributed in the labor force. Managers who follow Theory Y must recognize the importance of satisfying the needs for self-development according to Maslow's hierarchy. McGregor's Theory supports the interpretation that a manager could satisfy company goals while simultaneously satisfying personal desires. Emphasizing this feeling he stated: "Some people (including myself) see a genuine potential for a linkage of self-actualization with organizational goals."[37] McGregor further stated that such a wedding of goals could prove economically profitable:

> Strategy planning that takes into account this assumed human characteristic can lead both to a better society and to a more effective organization in sheer economic terms. It is a way of tapping latent resources of creativity, skill, and knowledge that are otherwise unavailable to the organization.[38]

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[37]Douglas McGregor, The Professional Manager (New York: McGraw-Hill Book Company, Inc., 1967), p. 77.

[38]Ibid.

Another leadership style theory is illustrated in Blake's Managerial Grid[39] which pits concern for production against concern for people. By representing these concerns as independent variables on a graph and giving each a range of intensity from one to nine, it is possible to chart a wide array of managerial styles, as many as eighty-one combinations. Of the five predominant combinations, only one, (9,9), representing maximum concern for both people and production, is considered ideal and called the "team" theory of management. The other four, (1,1), (1,9), (9,1), and (5,5) are considered less effective. Each combination has a description: (1,1) represents behavior that is too weak; (1,9) is behavior that is too soft; (9,1) is any behavior that is too hard. However, (5,5) is not so much a style as a statistical device for collecting any style of behavior not falling into the other four categories.

Likert developed a model containing four styles of management that he labeled Systems 1 through 4.[40] In the first, management places no confidence or trust in any of its subordinates. System 2 shows management to have condescending confidence and trust in subordinates such as in the master and servant relationship. System 3 shows

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[39]Robert Blake and Jane S. Mouton, The Managerial Grid (Houston: Gulf Publishing Co., 1964).

[40]Rensis Likert, The Human Organization (New York: McGraw-Hill Book Company, Inc., 1967).

an extension of confidence permitting subordinates to make minor decisions. System 4 is considered the ideal since management is seen as having complete confidence and trust in subordinates. In this system, workers are motivated by participation and involvement in developing economic rewards, setting goals, improving methods, and appraising progress toward goals. Likert had already identified these four systems with the following descriptive leadership titles: System 1 - Exploitive Authoritative; System 2 - Benevolent Authoritative; System 3 - Consultative; System 4 - Participative Group, in a previous study.[41]

Managers who answered Likert's self-administered questionnaire repeatedly opted for System 4 as being their "most ideal." It is the system for extensive and friendly superior-subordinate interaction. Once again, the system categorizing the friendliest relationships between manager and worker acquired the label of "most desirable."

Another theory of leadership style is Fiedler's "Theory of Leadership Effectiveness," a contingency model.[42] This theory states that the effectiveness of particular patterns of leader behavior are contingent upon the demands

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[41]Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Company, Inc., 1961), pp. 223-233.

[42]Fred E. Fiedler, The Theory of Leadership Effectiveness (New York: McGraw-Hill Book Company, Inc., 1967).

imposed by the situation. The results of Fiedler's study indicate that the socially distant (work oriented) leader tends to be more effective in very easy or very difficult situations. The highly sociable (interaction-oriented) leader tends to be more effective in situations that impose moderate leadership demands. When the key situational dimensions in the theory - the position power of the top leader, the degree of task structure, and the leader-member relations - are all high, the situation is most favorable for effective leadership. Position power is the formal authority which the leader's position holds. It includes the rewards and punishments associated with the position and the support the leader receives from his own superiors. The dimensions of task structure is based on the extent to which the leader is able to supervise and control his group members by virtue of a structured (routine) task. The more structured the task, the more enforceable the control. The leader-member relations dimension is the obvious interaction between manager and worker and scores high when the leader feels accepted and relaxed and when subordinates have confidence in their leader.

The identification of the LPC (least preferred co-worker) and the ASo (assumed similarity of opposites) are methods which Fiedler developed to measure his styles of leadership. A person with high LPC or low ASo would be classified as relationships oriented. A low LPC or high

ASo person would be classified as task oriented. Since Fiedler's effectiveness depends upon the situation, it would seem that no leadership style is the most ideal. A certain style may be the most ideal in a given instance only to be much less than ideal in another situation.

Leadership styles have been labeled with letters as in McGregor's X-Y Theory, and Fiedler's Contingency Model, with numbers as in the Blake-Mouton Grid Theory, or with names as in Likert's Theory. William Reddin chose to use both numbers and descriptive names to identify leadership styles in his 3-D Theory. The first two of his three dimensions have been defined as task orientation (TO) and relationships orientation (RO). The amount of TO and RO a manager is using at a particular time can be represented by two numbers between 0 (low) and 4 (high). If the TO and RO scales are each cut in half, four basic combinations occur. Figure 3 illustrates these combinations.

Reddin identified a TO or RO as negative when it is low (measured between 0 and 2), and as positive, a TO or RO measured between 2 and 4. This identification resulted in four basic styles. These four styles are illustrated in Figure 4 and identified as follows: if a leader has high relationships orientation, and high task orientation, his style is "Integrated;" if he has low RO and low TO, his style is labeled "Separated;" a high RO and low TO yields a "Related" style while a low RO and high TO is labeled

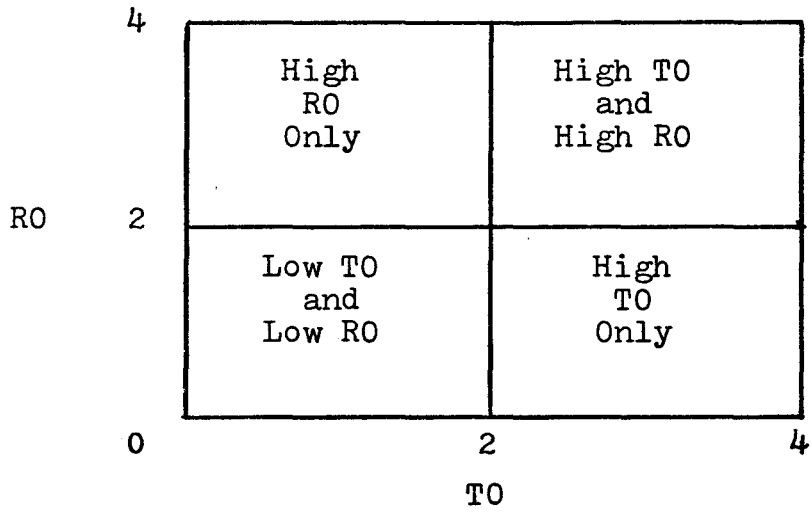

Figure 3. Four basic combinations of leadership styles.

From: Reddin, Managerial Effectiveness, p. 26.

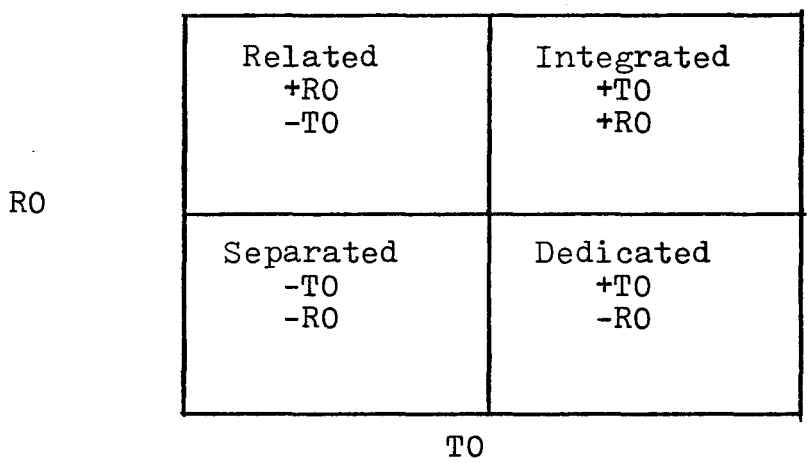

Figure 4. The 3-D basic styles of leadership behavior.

From: Reddin, Managerial Effectiveness, p. 27.

"Dedicated." These terms: Related, Integrated, Dedicated, and Separated, were chosen as labels for leadership styles since they do not by themselves suggest that one style is better than any other. The Integrated style describes a managerial style high in both TO and RO, while a Separated style characterizes behavior low in both TO and RO. On the other hand, the style with high TO and low RO is called Dedicated, that is, dedicated to the job. Finally, the Related style, with low TO and high RO, describes a leader who places the need for good relations with subordinates above the need for task success.

Reddin also analyzed the effectiveness of a basic style of leadership with a specific situation. In a given situation, a style may be either more appropriate or less appropriate. Reddin labeled four styles as more effective and four styles as less effective. These styles, graphically presented in Figure 5, depict a wide range of behavior.[43] A leader with a basic Integrated style is called, if more effective, an "Executive," and if less effective, bluntly a "Compromiser." The Separated leader can be a "Bureaucrat" if more effective or a "Deserter" if less effective. The leader with low relationships orientation but high task orientation is called an "Autocrat" when less effective, but a "Benevolent Autocrat" when more effective. Finally,

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[43]Reddin, op. cit., p. 40.

When used inappropriately and therefore less effectively	Basic Style	When used appropriately and therefore more effectively
Compromiser	Integrated	Executive
Deserter	Separated	Bureaucrat
Autocrat	Dedicated	Benevolent Autocrat
Missionary	Related	Developer

Figure 5. Basic styles of leadership with effectiveness relationships.

From: Reddin, Managerial Effectiveness, p. 40.

the Related leader is considered a "Missionary" if less effective, and a "Developer" when more effective. To best illustrate the broad dimensional aspect of the Reddin 3-D Theory, a three dimensional model is needed. In Figure 6, the front plane represents styles which are less effective in specific situations. The back plane represents styles that are situationally more effective. The center plane represents the two basic dimensions, TO and RO, with the four basic styles of leadership. Adding effectiveness (E), whether more or less, introduces the third dimension and leads to Reddin's eight managerial styles. A manager's "E" is the extent to which he achieves the out-put requirements of his position in the specific circumstances under study. Reddin predicted that:

> Managerial style assessment thus includes what is frequently unconscious assessment of the needs of the situation as well as the conscious assessment of behavior.[44]

Reddin compared his specific leadership styles with those of Likert, and Blake and Mouton. Five Reddin styles have specific positions on the Blake-Mouton Managerial Grid: (1,1) - Deserter; (1,9) - Missionary; (9,1) - Autocrat; (5,5) - Compromiser; and the ideal (9,9) - Executive.[45] While Reddin admitted using descriptive suggestions from

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[44]Ibid., p. 44.

[45]Ibid., p. 196.

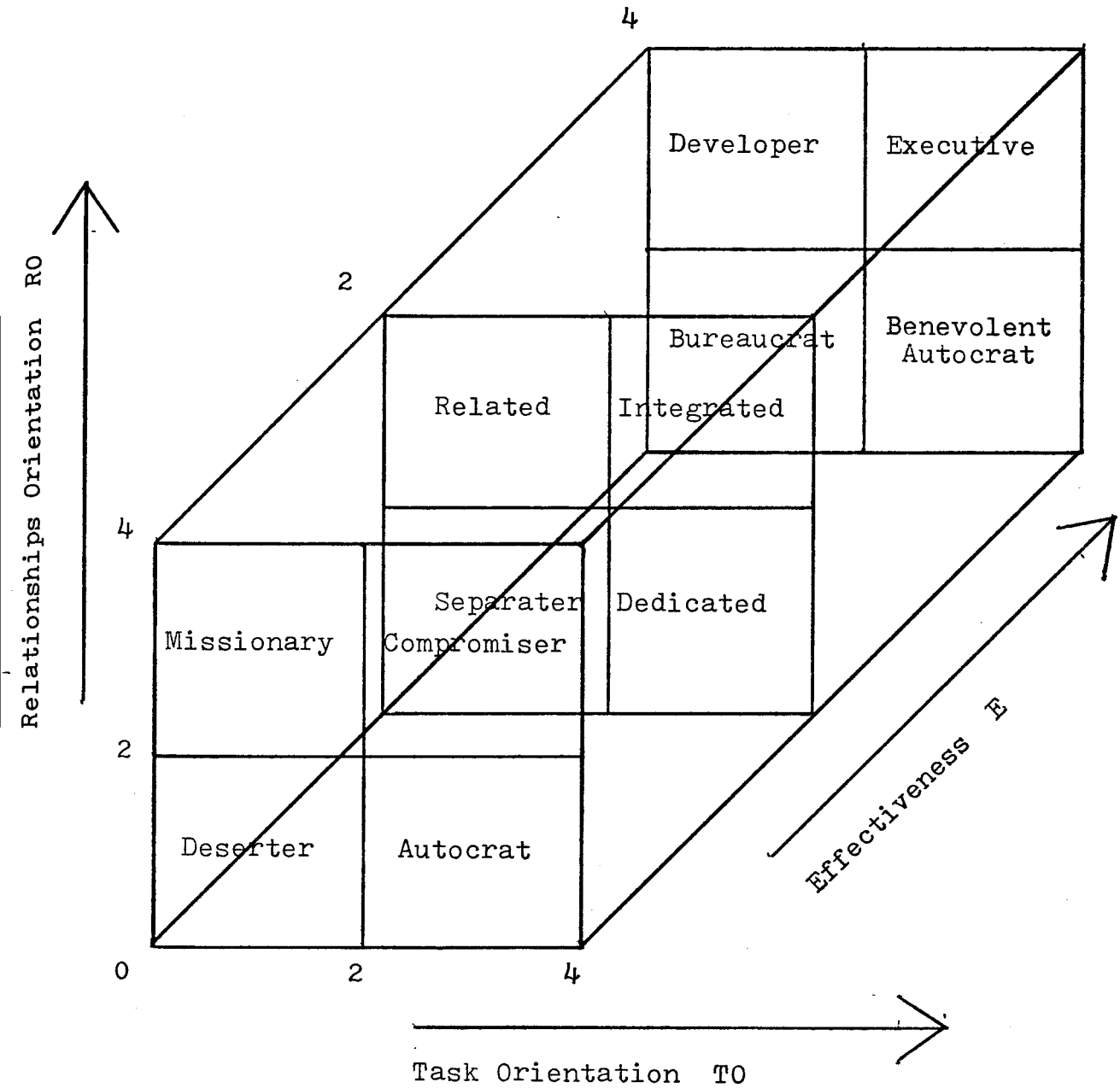

Figure 6. 3-D Theory of Managerial Effectiveness. Each style has a wide variety of behavior and range of effectiveness.

From: Managerial Effectiveness, p. 41.

the Managerial Grid for five of his styles, he dismissed a total comparison by pointing out that the Blake Grid is essentially a psychological idea-style model while his is a situational model.[46]

Reddin also compared four of his leadership styles with Likert's four Systems. Two of Reddin's styles are located on the less effective plane: Autocrat compared with System 1 (Exploitive Authoritative), and Compromiser compared with System 2 (Benevolent Authoritative). Both of these styles are in the high task orientation range. Reddin's two more effective styles are those with a high relationships orientation. The first, Developer, compared with System 3 (Consultative) rates low in task orientation. On Reddin's 3-D graph (Figure 6) this would be the point RO (4), TO (0), E (4). Reddin compared a combination, Executive-Developer, high in relationship orientation, with System 4 (Participative Group). This combination would be represented by the top of the more effective plane in Figure 6. The notation would indicate a collection of points: RO (4), TO (0 to 4), E (4). The comparison between Reddin's leadership styles and the Likert Systems has been tabulated in Figure 7.

In order to identify the leadership style of a manager, Reddin developed the "Management Style Diagnosis

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[46]Ibid., p. 194.

	LIKERT	REDDIN
SYSTEM 1	Exploitive Authoritative	Autocrat
SYSTEM 2	Benevolent Authoritative	Compromiser
SYSTEM 3	Consultative	Developer
SYSTEM 4	Participative Group	Executive-Developer

Figure 7. A comparison of Likert's Systems with Reddin's Leadership Styles.

From: Reddin, Managerial Effectiveness, p. 196.

Test," the MSDT. An analysis of the choices that any participant can make from sixty-four pairs of statements will yield a measure of the style used in the specific managerial situation under consideration. In a different kind of situation, the style of the same manager may vary. Reddin explained this: "Managers who change jobs and take the test again usually score differently. Since the job demands have changed, so has the style to deal with them."[47]

A style profile can be plotted for each manager which graphically illustrates the extent to which he uses each managerial style. The average score for any style is approximately 8 in Reddin's numerical analysis. A score of 11, or above, indicates a dominant style; a score of 10, or less, indicates a supportive style. For 70% of managers, the MSDT produces a single dominant style with a single supportive style. However, 24% may have a double dominant style. A mere 6% who test with several styles having the same score discover no discernible dominant style.[48]

The MSDT produces three diagnostic measures: TO, RO, and E. Each of these dimensions is scored on a scale from 0 to 4. A zero "E" represents ineffectiveness while a four "E" represents a maximum effectiveness. The three

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[47]Ibid., p. 273.

[48]Ibid., p. 240.

measures combine to identify one's Style Synthesis. This is an average style type based on a manager's overall behavior. While the Style Synthesis is not necessarily the same as the dominant style, it might be if the dominant style is highly dominant and the supportive style a more effective or less effective version of that dominant style. The particular usefulness of Style Synthesis, according to Reddin, lies in its ability to predict one's organizational philosophy.

The Managerial-Style Point, MSP, provides a graphic and numerical assessment of style behavior. For example, if the coordinates are TO, RO, E, an MSP of 1.0, 1.0, and 1.0 would signify a Deserter (see Figure 6). An MSP of 1.0 (TO), 3.0 (RO), and 4.0 (E) would identify the style of a Developer. All styles have an MSP.[49]

Since effectiveness is a function of each situation, the effective manager must possess situational sensitivity. Reddin defined this as ". . . the ability to read situations correctly for what they really contain."[50] But sensitivity is not enough to assure effectiveness. An additionally vital factor is situational management. Reddin explained this term: "The objective of situational management is

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[49]Ibid., p. 242.

[50]Ibid., p. 139.

to so arrange a situation that those in it cooperate of their own accord. It produces motivation to work and effectiveness."[51]

Since managers do not operate in a vacuum, they need to be aware of five situational elements: organization, technology, superiors, coworkers, and subordinates. Each of these five elements elicit demands on a manager's style. To be effective, he must accurately appraise these demands and make a comprehensive situation analysis. The manager's job is to control the situation and himself.

This central managerial position, surrounded by five demanding situational elements, uniquely describes the status of the school principal. He operates according to the rules of his board of education (organization). His building and its equipment (technology) directly affect his responses to situational demands. His superintendent (superior), colleagues and parent council (coworkers), and teachers (subordinates), all make respective demands. Halpin and Croft summarized these multiple demands: "The leader influences the behavior of the group members, but the group members also influence the behavior of the leader."[52]

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[51]Ibid., p. 160.

[52]Andrew Halpin and Don Croft, The Organizational Climate of Schools (Chicago: Midwest Administration Center, 1963), p. 86.

In summary, Reddin's Theory of Leadership Styles includes a numerical designation in each of three leadership dimensions: TO - task orientation; RO - relationships orientation, and E - effectiveness. These measures identify a Managerial-Style Point, MSP, which can be plotted into Reddin's 3-D graph (Figure 6). The position of the MSP in the graph gives a descriptive title of the identified leadership style. Four of these styles are less effective in the given situation: Compromiser, Deserter, Autocrat, or Missionary. The four more effective styles are labeled: Executive, Bureaucrat, Benevolent Autocrat, and Developer. Thus a manager can be identified by a numerical measure that lends itself to statistical analysis, as well as a descriptive, identifying title. Reddin suggested that a style of leadership depends on the situation, while Halpin and Croft suggest that the organizational climate depends on the leader. Thus leadership style and organizational climate appear as mutually interacting entities. Neither is truly independent of the other. Each contributes to the other.

ORGANIZATIONAL CLIMATE

In pertinent literature there are descriptive terms such as "psychological climate," "company culture," and "organizational personality." The term which appeared to be most widely used was organizational climate. Gibson and his colleagues presented their definition of climate as follows: ". . . a set of properties of the work environment, perceived directly or indirectly by the employees who work in this environment and is assumed to be a major force in influencing their behavior on the job."[53] Tagiuri and Litwin, in their collection of articles on organizational climate, offered a similar definition:

> Organizational climate is a relatively enduring quality of the internal environment of an organization that (a) is experienced by its members, (b) influences their behavior, and (c) can be described in terms of the values of a particular set of characteristics (or attributes) of the organization.[54]

Early writers, such as Taylor, did not discuss climate specifically. The major emphasis of these writers was on developing a rationalized system of organization. They concentrated on the concepts of division of labor, job analysis through motion and time studies, and the basic

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[53] Gibson, op. cit., p. 314.

[54] Renato Tagiuri and George Litwin, Organizational Climate: Explorations of a Concept (Boston: Graduate School of Business Administration, Harvard University, 1968), p. 27.

structure of the total organization. No one conceptualized "climate" at that time. In 1939, Lewin, Lippitt, and White, in their study of the effect of leadership styles, introduced the terms "climate" and "atmosphere" in conjunction with the relationships existing within an organization.

Often authors referred to these concepts without using the terms climate or atmosphere. Likert, for example, originally supported his ideal System 4 by advocating the importance of cooperative working relationships among all members of a work group ". . . to achieve a high level of confidence and trust and an effective flow of information and influence."[56] Working relationships are identifying dimensions of organizational climate. Recently, Likert specifically used "organizational climate" while continuing his defense of System 4 as the ideal. He stated:

> . . . the organizational climate created by the behavior and decisions of the top echelon of a firm exerts great influence upon the behavior and performance of lower levels. Consequently, the System 4 participative model is not only appropriative for the top echelon, it is <u>essential</u> that the top echelon use it to provide the organizational climate required to encourage lower echelons to use System 4 management.[57]

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[55]George H. Litwin, "Climate and Behavior Theory," in Tagiuri and Litwin, eds., <u>Organizational Climate</u>, p. 54.

[56]Likert, <u>New Patterns of Management</u>, p. 238.

[57]David G. Bowers, <u>Systems of Organization</u> (Ann Arbor: The University of Michigan Press, 1976), p. 154.

Several different classifications of climate are in existence. A review of three such classifications indicates numerous similarities. Forehand proposed that organizational climate consisted of characteristics that described an organization as well as distinguished it from other organizations. Such identifying characteristics need to be relatively enduring over a long period of time and also need to influence the behavior of members of the organization. Forehand's stated characteristics are: 1) size and structure - a measure, especially in large organizations, of the great distance (to the top executive) that diminishes input at the lower level; 2) leadership patterns - a major force in creating a climate which will influence worker satisfaction and organizational production; 3) system complexity - a measure of interaction among parts of the organization; 4) goal direction - a basis of ordering according to service, for example: business, philanthropic, or public schools; and 5) communications network - which might flow in only one direction with the manager issuing detailed instructions to each subordinate or which might flow in many directions throughout an interwoven system permitting interaction among all workers.[58]

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[58]Garlie A. Forehand, "On the Introduction of Persons and Organizations," in Tagiuri and Litwin, eds. Organizational Climate, pp. 65-82.

A second climate classification system was proposed by Litwin and Stringer. It included eight dimensions: 1) structure - a designation of the many constraints imposed by superiors in particular and the organization in general upon each employee; 2) challenge and responsibility - a measure of concern for success or achievement motivation; 3) warmth and support - a measure of positive reinforcement towards task performance; 4) reward and punishment - a way to measure approval or disapproval of employee behavior; 5) conflict - the need for resolving competition within the organization for available funds, space, personnel, materials, etc; 6) performance standards and expectations - criteria set by/for workers to determine their motivation to achieve; 7) organizational identity - perceived group loyalty of an employee; and 8) risk and risk-taking - the employee's perception of the acceptance of independent decision making within the framework of the managerial philosophy.[59] It was assumed by Litwin and Stringer that the results of the interaction of these eight dimensions was a measure of the achievement motivation that would exist within the organization. They related dimensions of climate with the need to achieve, affiliate, or exercise

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[59]George H. Litwin and Robert A. Stringer, Jr., Motivation and Organizational Climate (Boston: Division of Research, Harvard University Graduate School of Business Administration, 1968), pp. 45-65.

power. All employees would draw upon these dimensions to satisfy personal needs or social needs (affiliation), self-actualization (achievement), or the need for autonomy (the exercise of power).

Halpin and Croft have explored the interactions which occur in an elementary school. Their Organizational Climate Description Questionnaire (OCDQ) examines the school climate as perceived by the members of that organization.[60] This organizational climate refers to the feeling which exists in a given school. Such feelings can be measured and charted since the OCDQ yields a distinct "personality" for each school. The Halpin and Croft instrument examines eight dimensions of the organizational climate; four which focus on teacher behavior, and four which focus on the behavior of the principal. These behaviors are:

Teachers' Behavior

1. Disengagement refers to the teachers' tendency to be "not with it." This dimension describes a group which is "going through the motions," a group that is "not in gear" with respect to the task at hand . . . In short, this subtest focuses upon the teachers' behavior in a task-oriented situation.

2. Hindrance refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teachers construe as unnecessary "busywork." The teachers perceive that the principal is hindering rather than facilitating their work.

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[60] Halpin and Croft, op. cit.

3. Esprit refers to morale. The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. Intimacy refers to the teachers' enjoyment of friendly social relations with each other. This dimension describes a social-needs satisfaction which is not necessarily associated with task-accomplishment.

Principals' Behavior

5. Aloofness refers to behavior by the principal which is characterized as formal and impersonal. He "goes by the book" and prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face-to-face situation. His behavior, in brief, is universalistic rather than particularistic; nomothetic rather than idiosyncratic. To maintain this style, he keeps himself - at least, "emotionally" - at a distance from his staff.

6. Production Emphasis refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive and plays the role of a "straw boss." His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

7. Thrust refers to behavior by the principal which is characterized by his evident effort in trying to "move the organization." Thrust behavior is marked not by close supervision, but by the principal's attempt to motivate the teachers through the example which he personally sets. Apparently, because he does not ask the teachers to give of themselves any more than he gives of himself, his behavior, though starkly task-oriented, is nonetheless viewed favorably by the teachers.

8. Consideration refers to behavior by the principal which is characterized by an inclination to treat the teachers "humanly," to try to do a little something extra for them in human terms.[61]

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[61]Andrew W. Halpin, Theory and Research in Administration (New York: The Macmillan Company, 1966), pp. 150-151.

Each of the behavioral dimensions is represented in the instrument as a subtest. From analysis of these subtests, Halpin and Croft have identified three general factors of organizational climate: SOCIAL NEEDS, ESPRIT, and SOCIAL CONTROL. These factors describe the types of behavior that occur among members of elementary school faculties.[62]

Intimacy and Consideration secure high ratings on Factor I - SOCIAL NEEDS. Through these subtest items, respondents describe their individual attitudes toward the organization. Halpin and Croft explained: ". . . each person describes his own friendly relations with the group rather than the friendly relations that presumably obtain among the group members."[63]

Esprit and Thrust yield positive loadings or ratings on Factor II at the same time that Disengagement together with Hindrance yield high negative loadings. The factor, ESPRIT, is a group measure. Halpin and Croft noted: ". . . the respondents are describing the behavior of the group qua group, and not their own "individual" behavior. For this reason we view ESPRIT as a 'group' measure."[64]

Aloofness and Production Emphasis add together for

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[62]Halpin and Croft, op. cit., p. 44.

[63]Ibid., p. 42.

[64]Ibid., p. 43.

high loadings on Factor III - SOCIAL CONTROL. Halpin and Croft said of these subtests that they ". . . represent the behavior of his teachers . . . social control . . ."[65]

Having identified these three factors, Halpin and Croft restated their aim and purpose in establishing their Organizational Climate Description Questionnaire:

> . . . we very deliberately wanted to develop subtests which would allow us to interpret the relationship between measures of the group's behavior and measures of the leader's behavior. In other words, we wanted to be able to view both the group members' behavior and the leader's behavior from the same vantage, and . . . to estimate to what extent each of the two "general" factors SOCIAL NEEDS and SOCIAL CONTROL, was operative.[66]

Following their analysis of the eight subtests at the individual level, Halpin and Croft further analyzed these tests at the school level. Then they classified the schools into six major clusters in which each depicted a different type of Organizational Climate.

The Open Climate depicts a situation in which the members enjoy extremely high Esprit. The teachers work well together and are not burdened by mountains of busy work or by routine reports (low Disengagement and low Hindrance). Halpin and Croft felt that:

> The behavior of the principal represents an appropriate integration between his own personality

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[65] Ibid., p. 44.

[66] Ibid., p. 50.

> and the role he is required to play as principal. In this respect his behavior can be viewed as "genuine." Not only does he set an example by working hard himself (high Thrust) but, depending upon the situation, he can either criticize the action of teachers or can, on the other hand, go out of his way to help a teacher (high Consideration).[67]

The Autonomous Climate yields almost total freedom for teachers to find ways within the group for satisfying their social needs. The teachers work well together and accomplish the tasks of the organization. The principal sets up procedures and regulations to facilitate the teachers' task. The morale of the teachers is high, but not as high as in the Open Climate. Halpin and Croft decided that in an Autonomous Climate:

> The principal remains aloof from the teachers, for he runs the organization in a businesslike and a rather impersonal manner (high Aloofness) . . . he appears satisfied to let the teachers work at their own speed, he monitors their activities very little (low Production Emphasis) . . . He is genuine and flexible, but his range of administrative behavior as compared to that of the principal in the Open Climate is somewhat restricted.[68]

The Controlled Climate is marked by a press for achievement at the expense of social-needs satisfaction. The teachers are completely engaged in the task although few procedures have been set up to facilitate their work. Job satisfaction results primarily from task-accomplishment, not from social-needs satisfaction. Halpin and Croft stated

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[67]Ibid., p. 61.

[68]Ibid., p. 62.

that in a Controlled Climate: "The principal is described as dominating and directive; he allows little flexibility within the organization and he insists that everything be done 'his' way (high Production Emphasis)."[69]

The Familiar Climate is conspicuous for the friendly manner of all involved. The teachers are disengaged and accomplish little in a task-oriented situation. Too many people are trying to tell others how things should be done. The teachers are not burdened with routine reports. Morale is average but stems from social-needs satisfaction. Halpin and Croft proposed that in the Familiar Climate:

> The behavioral theme of the principal is essentially, "let's all be a nice happy family" . . . He wants everybody to know that he, too, is one of the group . . . is not aloof and not impersonal or official in his manner . . . The principal does not emphasize production; . . . No one works to full capacity, yet no one is ever "wrong" . . .[70]

The Paternal Climate is characterized by the very ineffective attempts of the principal to control the staff members as well as to satisfy their social needs. The teachers do not work well together, nor do they enjoy friendly relationships with each other. A low Esprit results since the teachers obtain inadequate satisfaction from both task-accomplishment and social-needs. Halpin and Croft found that in the Paternal Climate:

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[69]Ibid., p. 63.

[70]Ibid., p. 64.

> The principal . . . is the very opposite of aloof; he is everywhere at once, scurrying here and there, checking, monitoring and telling people how to do things. In fact, he is so non-aloof that he becomes intrusive. . . . His view is that "Daddy knows best." . . . Although he preserves an average degree of Thrust . . . he nonetheless fails to motivate the teachers primarily because he, as a human being, does not provide an example, or an idea, which the teachers can emulate.[71]

The Closed Climate marks a situation in which the group members obtain little satisfaction with respect to either task-achievement or social-needs. The teachers do not work well together and group achievement is minimal. Job satisfaction is low. Teachers may obtain some little satisfaction from friendly relations with other teachers (average Intimacy). Halpin and Croft described the essence of the Closed Climate as follows:

> The principal is highly aloof and impersonal in controlling and directing the activities of the teachers (high Aloofness) . . . He sets up rules and regulations about how things should be done, and these rules are usually arbitrary (high Production Emphasis) . . . His cry of "let's work harder" actually means "You work harder." . . . he, himself, does not provide adequate leadership for the group.[72]

A complete description of each climate based on low, moderate, or high loadings on the subtests of the Organizational Climate Description Questionnaire has been depicted in Figure 8. Figure 8 is a literal interpretation of Table 8, p. 59., in Halpin and Croft.

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[71] Ibid., p. 65.

[72] Ibid., p. 66.

Climate / Subtest of OCDQ	Open	Autonomous	Controlled	Familiar	Paternal	Closed
Disengagement	low	low	very low	high	very high	very high
Hindrance	low	low	high	low	low mod	mod
Esprit	very high	mod high	mod high	mod	low mod	very low
Intimacy	mod	very high	low	high	low mod	mod high
Aloofness	low	high	mod high	low	very low	mod high
Production Emphasis	low	low	very high	very low	mod high	mod high
Thrust	high	mod	mod	mod	mod	low
Consideration	mod high	mod	low mod	high	mod high	low

Figure 8. Identification of Halpin's Profiles of School Climates based on low, moderate, or high loadings on the subtests of the OCDQ.

From: The Organizational Climate of Schools, p. 59.

Three climate classification systems have been reviewed in considerable detail with the suggestion that they bear a number of similarities despite the fact that they were developed independently. Gibson and associates developed a chart illustrating the similarities among the three climate classifications.[73] This chart is reproduced in Figure 9. An obvious similarity emerges: Forehand's leadership patterns are similar to the Halpin and Croft dimensions identified as Esprit, Consideration, Production Emphasis, Aloofness, and Thrust, and also similar to the challenge and responsibility, warmth and support, and reward and punishment dimensions of Litwin and Stringer.

Halpin and Croft's model for Organizational Climate was reviewed in great detail because it was intended for use in the present study. The Halpin and Croft classification system will be used because of its intent to classify group behavior as well as leader behavior, to maintain a balance between the social needs of individuals and the requirements set by organizations for social control, and to identify school organizations with respect to their "effectiveness" or "ineffectiveness."[74]

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[73]Gibson, op. cit., p. 323.

[74]Halpin and Croft, op. cit., pp. 16-17.

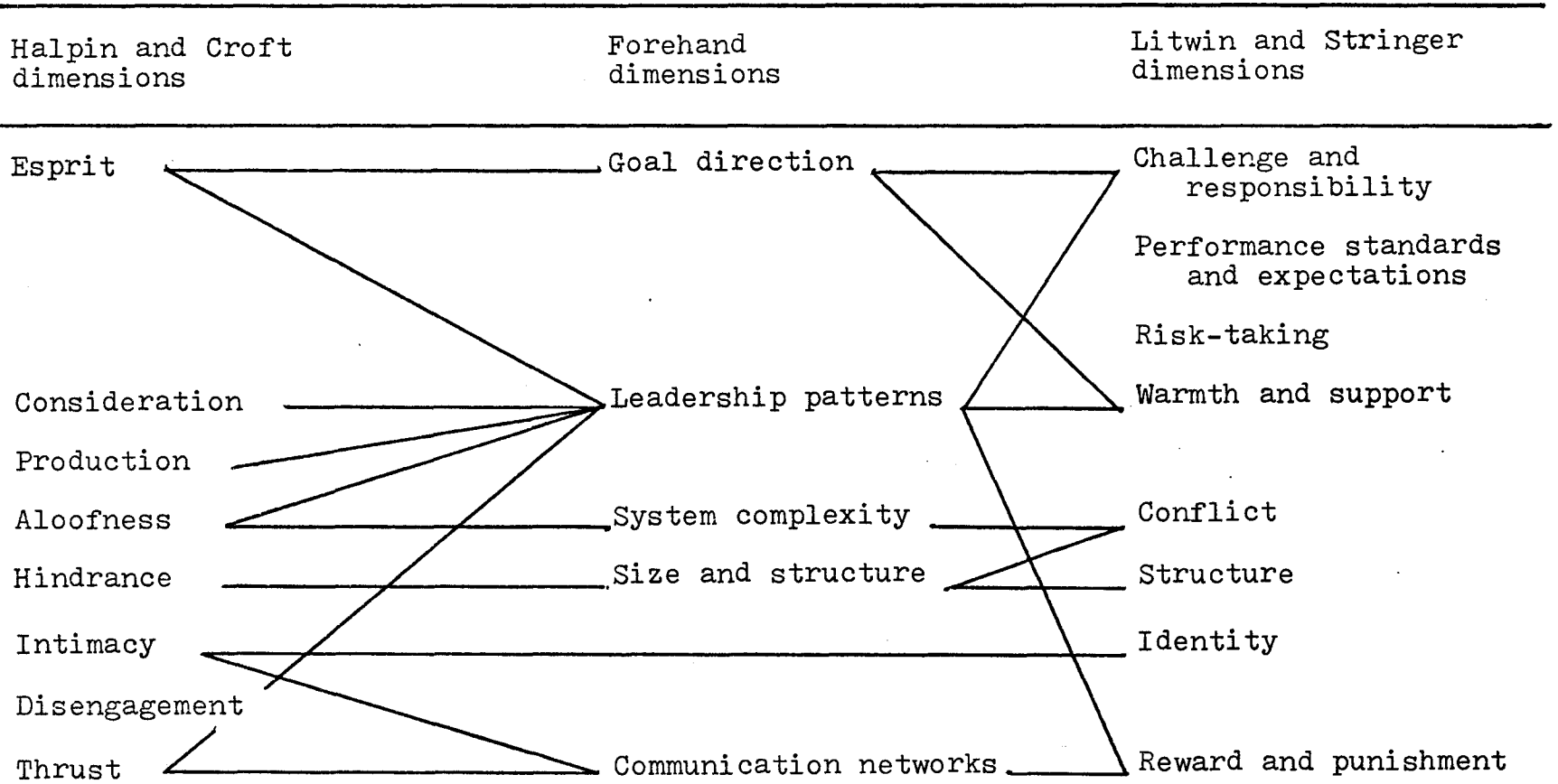

Figure 9. Relating three climate classifications: the Halpin and Croft, Forehand, and Litwin and Stringer models.

From: Gibson, Ivancevich, and Donnelly, Organizations: Structure, Process, Behavior, p. 323.

DISSERTATION RESEARCH

Doctorial dissertations studying open space schools have, like the schools themselves, mushroomed overnight. Prior to 1970 there were few research projects listed in Dissertation Abstracts which made reference to the concept of open space. Since then the number has increased each year. Most studies dealt with structure and programs. Few of these studies referred to the leadership styles of open space principals.

In 1962, Yulo anticipated the open space building boom by recommending that K-12 school buildings should have large open areas in which space dividers would provide flexible learning areas.[75] These areas could house two or more teachers working concurrently with two or more groups. Douthitt researched the criteria related to the use and selection of classroom furniture. He spoke of tomorrow's classroom needs as they might affect school construction:

> The school program and school plant must be flexible in that they are able to meet and satisfy the needs of groups of various sizes and interests. This involves the multiple, yet efficient, use of space and furniture. Schools of tomorrow, even though they are being planned

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[75]Frank R. Yulo, "General Factors Related to the Educational Specifications for the Physical Facilities of the Small 12-Year School" (unpublished Ed. D. dissertation, Columbia University, 1962).

> and constructed today, must meet tomorrow's needs and methods. These schools and classrooms must provide the maximum in both comfort and efficiency of use.[76]

Continuing the study of the effective use of "egg-crate" school buildings, Gilmore[77] found that some schools had removed walls between classrooms in order to accomodate new instructional programs. The movable partitions which replaced these walls were being moved one or more times each day. Whitehead[78] found that provisions for flexibility had little influence on the school program. He interviewed architects, engineers, school planners and principals in the schools where these programs were operating. He found that large areas of open space had a most desirable affect on the operation of the school. Whitehead also discovered that incorporating large open areas into the plans of the new school contributed to a considerable reduction in the original cost of the building.

While these four dissertation speak of the concept, they do so without specifically mentioning "open space."

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[76]Ira Douthitt, Jr., "A Study of the Present Status of Classroom Furniture in Selected Schools" (unpublished Ed. D. dissertation, University of Tennessee, 1962).

[77]Henry Gilmore, Jr., "The Relationship Between New Instructional Programs and Certain Selected Flexible Features of School Buildings" (unpublished Ed. D. dissertation, University of Washington, 1965).

[78]Wilmot D. Whitehead, "A Study of Design Factors Relating to the Initial Cost and Utilization of School Buildings" (unpublished Ed. D. dissertation, University of Tennessee, 1967).

However, by 1970 the words "open space" began to appear in dissertation titles. One of the first deals primarily with teachers and their opinions and yields results of interest to principals. Cheek[79] investigated open space elementary schools in both California and Michigan. He asked teachers to assess the altered roles of both principal and teacher when reassigned from a conventional to an open space school. He found that almost:

> . . . one-half indicated the principal was primarily the one whose role had to be modified, while one-third indicated the teacher was the main person to assume a new role . . . several teachers felt it necessary for the role of both teacher and principal to be modified.[80]

The typical conflict between teachers and principals was labeled by Brunetti as a conflict between professional and bureaucratic elements in the formal authority structure of the school system. His research showed that compared to teachers in self-contained classrooms, the open space teachers perceived themselves as having more influence.[81] Brunetti agreed with Cheek that open space schools held implications for changing the decision making and task

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[79]Robert Cheek, "The Opinions of Teachers Teaching in Selected Open-Space Elementary Schools" (unpublished Ph. D. dissertation, Wayne State University, 1970).

[80]Ibid., p. 117.

[81]Frank A. Brunetti, Jr., "The Teacher in the Authority Structure of the Elementary School: A Study of Open-Space and Self-Contained Classroom Schools" (unpublished Ph. D. dissertation, Stanford University, 1970).

responsibilities of the teacher and for adjusting the role of the principal to a position of reduced influence and authority.

A study of the leadership behavior dimension of principals in open space schools was conducted by Preston.[82] He gathered data from teachers in five open space and five traditional elementary schools. A comparison of teacher perceptions of the leader behavior effectiveness of their principal yielded significant differences between the two groups. The teachers of the traditional elementary schools perceived their principal to be more effective. Preston explained this result to be due to the teacher's perception of the principal's role as different because of different settings. Apparent abatement of the traditional principal role may be the cause for making the open space elementary school principal appear to be the less effective leader.

Laramy turned from studying the effectiveness of principal leadership to investigating teacher satisfaction with bureaucratic dimensions relating to spacial openness.[83]

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[82]Richard L. Preston, "A Comparative Analysis of Learning Climate and Leader Behavior of Open Space Elementary and Traditional Elementary Schools" (unpublished Ph. D. dissertation, Miami University, 1972).

[83]John Edward Laramy, "An Investigation into the Measurement of Spatial Openness and Its Relationship to Perceptions of Bureaucratic Dimensions and Organizational Climate in Schools Differing in Architectural Design" (unpublished Ph. D. dissertation, University of Minnesota, 1975).

His findings closely relate to the ideas of Reddin and the suggestions from Halpin and Croft. Laramy found that:

> . . . an increase in the degree of spacial openness was significantly related to . . . A concommitant increase in the degree to which teachers perceived their social needs are being satisfied, a sense of accomplishment, the enjoyment of friendly social relationships and the principal's inclination to treat teachers "humanly."[84]

Another researcher who questioned satisfaction among teachers in open space schools found similar results. Murphy compared answers from open space school teachers with answers from self-contained classroom teachers. Her results showed that the first group of teachers was no better satisfied than the second group with such issues as teaching per se, rapport among teachers, the salaries of teachers, teacher load and teacher status. However, open area team teachers were more satisfied with school facilities and services, curricular issues, and especially, rapport with the principal.[85]

Huntington[86] was another scholar who attempted to determine if open space affected teacher satisfaction. He

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[84]Laramy, Dissertation Abstracts International, Vol. 76, No. 8 (February, 1976), p. 4917-A.

[85]Dorothy L. Murphy, "The Effects of Demographic and Personality Factors on Job Satisfaction of Self-Contained Classroom Teachers and Open-Area Team Teachers" (unpublished Ed. D. dissertation, University of Houston, 1976).

[86]Fred W. Huntington, III, "The Effect of Visibility Upon Open Space Teachers and Its Relationship to Predicting Teacher Satisfaction in Open Space Schools" (unpublished Ph. D. dissertation, United States International University, 1976).

concluded that open space did influence the way teachers felt about teaching. Teachers generally said they gained in enthusiasm, self-confidence, and effectiveness as a result of teaching in an open space school. He also found that teachers who requested assignment in open space schools tended to be more satisfied than those who were simply placed there. Both Murphy and Huntington found that open space teachers were satisfied with the situation in which they were teaching.

Knight used an unusual technique for recording his research into the administrator's role in an open space school. He put interviews with all principals, teachers, and students on motion picture film.[87] Knight reached the following conclusion about open space principals: "Many of their perceived and actual roles are identical to the roles of principals in more traditional schools, particularly those roles dealing with the maintenance function."[88]

Annala[89] conducted an in depth study of open space principals which described their work behavior in terms

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[87]Melvin E. Knight, "A Critical Documentary Film Study of the School Administrator's Role in New and Emerging Organizational Patterns and in the Operation of an Innovative Open-Space School" (unpublished Ed. D. dissertation, Auburn University, 1971).

[88]Ibid., p. 45.

[89]David C. Annala, "A Description of the Work Tasks of the Open Space Elementary School Principal" (unpublished Ed. D. dissertation, University of Denver, 1974).

of the tasks performed and the percentage of time spent on these tasks. He agreed with Knight's conclusion that principals spend a great deal of time performing school related management functions. However, Annala's conclusion that: "The open space elementary principals did not emerge as 'educational leaders'."[90] was surprising and disturbing. Some understanding of this comes from a description Annala included concerning principal-teacher conferences:

> The central topics of principal-teacher conferences were teacher morale, shared decisions, adherence to school regulations, and planning faculty meetings. Principal-teacher conferences were not held on the subject of improvement of instruction and enrichment of the curriculum.[91]

The literature, however, shows that researchers disagree on the role an open space school principal plays in program development. Wakeland's analysis of the principal's role in open space elementary schools in Texas, does not agree with Annala's results. Wakeland found that:

> Practically all of the principals are responsible for instructional supervision and provide leadership for the implementation of many new curricular and organizational concepts such as team teaching, non-gradedness, and open education. About 75 percent of the principals also involve teachers in making decisions concerning the implementation of these concepts.[92]

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[90] Ibid., p. 79.

[91] Ibid.

[92] Justin M. Wakeland, "The Role of the Principal in Open Plan Elementary Schools in Texas as Perceived by the Principals of These Schools" (unpublished Ed. D. dissertation, North Texas State University, 1972), p. 118.

Such differences in results give credence to Reddin's contention concerning situational theory with respect to leadership behavior: how a leader reacts depends on the specific situation encountered.[93]

Tirpak's study[94] deals with organizational climate rather than open space schools. He used the Halpin and Croft Organizational Climate Description Questionnaire as well as the Sixteen Personality Factor Questionnaire developed by Cattell and Eber, with elementary principals in Ohio to discover what kind of principals manage schools which have an open organizational climate. His results indicate the following:

> The principals of open climate schools tend to be warmhearted, sociable, good-natured, and attentive to people. These principals are characterized by their high degree of emotional stability, frustration tolerance, and calm and realistic approach to life. Open climate principals are perservering, determined and conscientious.[95]

The Organizational Climate Description Questionnaire Halpin and Croft's OCDQ, has been used by some researchers to compare school climate with the personal demographic data of principals. Several of these studies will be cited.

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[93]Reddin, Managerial Effectiveness, p. 40.

[94]Richard Tirpak, "Relationship Between Organizational Climate of Elementary Schools and Personal Characteristics of the Schools' Principals" (unpublished Ph. D. dissertation, The University of Akron, 1970).

[95]Tirpak, Dissertation Abstract International, Vol. 32, No. 1 (July, 1972), p. 145-A.

Maggard[96] reported that openness of climate was greater in schools with male principals, young principals, and least experienced principals. Raspa's findings[97] were in agreement with Maggard's. His conclusions indicated that a more open climate can be expected if the principal is a younger person and has had fewer years of experience at the present school. Chaplain,[98] on the other hand, found just the opposite to be true: a more open climate can be expected if the principal is an older person. After administering the OCDQ in Fairfax County, Virginia, he reported that increased experience in education, in the current assignment as well as in administration generally, all were conducive to a climate that was more open. The unusual contradiction that appears between these last two studies becomes more of an enigma when one realizes that both were conducted about the same time under the auspices

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[96]Robert L. Maggard, "A Comparison of Principals' and Teachers' Perceptions of Organizational Climate in Elementary Schools" (unpublished Ed. D. dissertation, University of Arkansas, 1972).

[97]Salvatore L. Raspa, "An Investigation of Selected Characteristics of Principals, Teachers, and Schools in Open and Closed Climate Public Elementary and Secondary Schools in St. Mary's County, Maryland" (unpublished Ed. D. dissertation, The George Washington University, 1976).

[98]Oscar S. Chaplain, Jr., "A Comparison of Selected Characteristics of Principals, Teachers, and Schools in Open and Closed Climate Elementary Schools in Fairfax County, Virginia" (unpublished Ed. D. dissertation, The George Washington University, 1976).

of the same university. One can conjecture that these differences arise from the peculiarity of the situation in each school, hiring practices of the county boards of education, or radical differences in the personalities of the principals interviewed.

Perhaps the conclusions from the Petasis study[99] are more relevant in this matter. He used the OCDQ in the Des Moines, Iowa school system. His pertinent conclusions follow: "There is no relationship between organizational climate and: (1) staff size, (2) teacher age, (3) principal age, and (4) principal administrative experience."[100]

Kobayashi,[101] using the OCDQ, found no significant differences in the organizational climate of a school with a male principal as compared to a school with a female principal. He did find significant differences with respect to the leadership dimension of thrust, production emphasis, and aloofness. Female principals showed greater concern for moving the organization towards its goals, with closer monitoring of teachers, and strict adherence to rules and

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[99]Aris Poludoros Petasis, "The Relationship of Organizational Climate to Selected Variables" (unpublished Ed. D. dissertation, Drake University, 1974).

[100]Petasis, Dissertation Abstracts International, Vol. 35, No. 11 (May, 1975), p. 6991-A.

[101]K. Jessie Kobayashi, "A Comparison of Organizational Climate of Schools Administered by Female and Male Elementary School Principals" (unpublished Ed. D. dissertation, University of the Pacific, 1974).

policies. This compares with Reddin's task orientation dimension and suggests that female principals are to be expected to measure higher in TO than in RO (relationships orientation).

Seidman[102] made an extensive study of open space elementary schools using the OCDQ. An article summarizing her findings was published in Education. She stated:

> Hiring practices for open-space schools should be re-evaluated. Greater attention should be given to hiring women principals for these schools. A balance between experienced and inexperienced personnel should be sought in each school.[103]

Calvery[104] used the Halpin and Croft OCDQ in his investigation of relationships between bureaucratic structure and organizational climate within selected elementary schools in Mississippi. He found significant differences between teachers' perceptions of technical competencies of principals and the organizational climate of a school. As the measure of technical competence of the principals increased, the degree of closedness of the climate also increased. Thus

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[102]Miriam R. Seidman, "Organizational Climate in Open-Space Elementary Schools" (unpublished Ed. D. dissertation, Hofstra University, 1973).

[103]Miriam R. Seidman, "Comparing Physical Openness and Climate Openness of Elementary Schools," Education, 95 (Summer, 1975), p. 350.

[104]Robert S. Calvery, "The Relationship Between the Bureaucratic Structure and the Organizational Climate of Selected Elementary Schools" (unpublished Ed. D. dissertation, Mississippi State University, 1975).

Hall's Technical Competence measure can be compared to Reddin's measure of effectiveness. It would appear that principals in schools with climates tending toward the closed end would be the most effective leaders.

Several studies have been conducted to review or to reappraise Halpin and Croft's Organizational Climate Description Questionnaire. Three of these were sponsored by Harold W. Gentry at the University of Georgia. Two studies, enacted in 1976, dealt with a review of the use of the OCDQ in dissertations completed up to that time.

Green[105] reviewed the use of the OCDQ in elementary schools, while Mullins[106] did the same with schools other than elementary. Each of these researchers found the OCDQ to be a very popular instrument of research and evaluation.

The third study supervised by Gentry was completed in 1972. Hayes[107] re-evaluated the conceptualization of climate as proposed by the original Halpin and Croft data.

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[105]Charles H. Green, "The Organizational Climate Description Questionnaire: A Review and Synthesis of Research Conducted in Elementary Schools, 1963-1972" (unpublished Ed. D. dissertation, University of Georgia, 1976).

[106]James W. Mullins, "Analysis and Synthesis of Research Utilizing the Organizational Climate Description Questionnaire: Organizations Other Than Elementary Schools, 1963-1972" (unpublished Ed. D. dissertation, University of Georgia, 1976).

[107]Andrew Hayes, "A Reappraisal of the Organizational Climate Description Questionnaire" (unpublished Ed. D. dissertation, University of Georgia, 1972).

Halpin, himself, assisted Gentry in supervising this study. Hayes' conclusions give strong support for the climate dimensions as originally described by Halpin and Croft. In addition, the Hayes study developed second-order factors, obtained from the original data which gave even stronger support to the Halpin and Croft analysis. Andrew Hayes developed his own computer analysis for OCDQ data. In 1978, Hayes, working at the University of North Carolina in Wilmington, accepted the responsibility for scoring and statistically analyzing the data from research using the Organizational Climate Description Questionnaire.

Leadership style has been studied by researchers using a variety of instruments. White used the Leadership Behavior Description Questionnaire (LBDQ) developed in the Ohio State studies to analyze two behavioral characteristics: Consideration and Initiating Structure. Based on his data White concluded that principals of open space elementary schools tend to concern themselves more with the needs of the individual than with the needs of the organization. White further concluded that principals of open space schools require flexibility and adaptability to cope with their unique environments.[108]

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[108]Donald A. White, "Perceptual Style and Leader Behavior of Elementary Principals in Open Space Schools" (unpublished Ed. D. dissertation, Hofstra University, 1973).

One dissertation dealt with the perceived leadership styles of school district superintendents. Using the Likert model, Mularz reached several conclusions concerning the attitudes of and the channels of communication between superintendents and principals. Once again the ideal style, Likert's System 4, was the popular choice of those who were interviewed. Mularz reported that:

> None of the respondents . . . perceives himself as authoritative exploitive in his dealings with his principals and staff . . . Both groups singularly perceive themselves as participative group in their style of leadership . . .[109]

More than half of the superintendents in the Mularz study considered their interaction with their principals to be democratic in style.

Michaletz investigated four leadership dimensions which can be compared with parts of Reddin's theory. The purpose of the Michaletz study was:

> . . . to determine, in the exercise of the leadership role, to what degree principals perceive:
> 1. that they have the capacity to effect change. (Expectation Dimension)
> 2. that they are to organize activities and resources around educational problems to promote ideas and stimulation for teachers about school needs which are changing. (Task Dimension)
> 3. that they share and delegate their authority. (Authority Dimension)

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[109]Stanley L. Mularz, "Implications of Leadership Style and Goal Setting on Leadership Process as Perceived by School Superintendents" (unpublished Ed. D. dissertation, Loyola University of Chicago, 1971).

4. that they take into consideration the needs and interests of the teaching staff. (Expressive Dimension)[110]

Michaletz's task dimension compares with Reddin's dedicated style of leadership, authority dimension compares with the integrated style, and expressive dimension with related style. Michaletz was especially interested in the role of the principal in effecting change and for that reason introduced the expectation dimension. This dimension does not match a basic style in the 3-D Theory, but does compare with Reddin's situational management.

Shannon[111] studied two groups of Chicago principals using Reddin's MSDT and Fiedler's LPC. She found the MSDT to be the more sensitive instrument. She further concluded that the two groups of principals were more alike than different in relationships orientation on both tests. However, Shannon discovered that on the MSDT the older group showed a stronger measurement in task orientation.[112]

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[110]James Michaletz, "A Comparison of the Perceptions of Two Groups of Elementary School Principals Concerning the Exercise of the Leadership Role in Effecting Change" (unpublished Ph. D. dissertation, Loyola University of Chicago, 1973).

[111]Mary E. Shannon, "A Comparative Study of Indices of Managerial Behavior Styles of Principals Certified by Means of Examination" (unpublished Ph. D. dissertation, University of Illinois, 1972).

[112]Ibid., p. 108.

DePaul [113] used the MSDT to study the leadership styles of two different groups of Chicago principals. One group worked in ESEA Title I schools while the other group worked in Non Title I schools. The following findings are relevant to the present study:

> No significant differences between principals in Title I and Non Title I schools were found when measured on the basis of the degree of task orientation, relationships orientation, effectiveness, or Style Synthesis . . . older principals and female principals all tended to be more relationships oriented in their approach to leadership behavior than younger and male principals. . .there was a high degree of relationships orientation on the part of principals throughout the study.[114]

Shannon had reported true for both groups of the principals she surveyed that the related basic style of the Reddin model prevailed over the other basic styles.[115] This same statistic held true in the DePaul study.[116]

Since the emergence of dissertation research on the topic of open space in the 1970's numerous studies have been completed as has been detailed in the preceding pages. The Halpin and Croft OCDQ and the Reddin MSDT have been used separately in a variety of schools and organizational

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[113] Frank J. DePaul, "A Study of the Perceived Leadership Styles of Principals in ESEA Title I and Non Title I Elementary Schools in Chicago" (unpublished Ed. D. dissertation, University of Illinois, 1975).

[114] Ibid., pp. 119-121.

[115] Shannon, op. cit., pp. 106-109.

[116] DePaul, op. cit., p. 88.

settings. Data resulting from these studies has been pertinent and informative. In none of these studies, however, is there any conflict with the intent of this study.

Reddin's theory of leadership styles depends upon the situation in which the leader operates. Halpin and Croft have amply demonstrated that the organizational climate of a school depends directly upon the leadership of the principal. The present study will use the MSDT and the OCDQ to compare the leadership style of the principal with the organizational climate in the situation of an open space elementary school.

CHAPTER III

PARTICIPANTS AND PROCEDURE

Many schools have been designed to provide large open space interiors. One such design consists of open space pods. Each pod contains sufficient area for four or more traditional size classes. Several pods compose a unit or a school. The pods may flow outward into an open space area used for large group activities, into an open corridor used for peripheral access to all rooms, or into a common media center. Identifying schools in which open space pods exist and serve the purpose for which they were designed was the first phase of this study. The search was conducted in the Chicago Metropolitan area.

Within the Chicago Metropolitan area there are approximately 1900 public and private elementary schools. The Metropolitan area includes the counties of Cook, DeKalb, DuPage, Kane, Kendall, Lake, McHenry, and Will. David Robert surveyed the schools in this area for a study sponsored by the National Institute of Education. Robert's questionnaire was sent to each of the public and private elementary schools in the Chicago Metropolitan area. According to Robert: "Eight hundred and forty schools responded to

the survey . . . Seven hundred and ninety-six usable questionnaires were returned."[1]

The results of Robert's survey yielded thirty-eight schools designed with open space pod facilities. Using this list of thirty-eight schools, nineteen appeared to meet the criteria established for the current study. Criteria for inclusion among the nineteen were that schools would have to be public, suburban, primary and intermediate, and operational for at least five years in accordance with the dimensions of the open space concept:

1. An abundance of open space with its inherent flexibility;
2. Flexibility in grouping and student mobility;
3. Easy and frequent communication between open space occupants;
4. Cooperative and continuous teacher planning.

In order to evaluate the presence of the dimensions. a brief questionnaire was developed with Likert-type answers. The purpose of the questionnaire was to identify the type of learning setting that existed in each of the sample schools. The questionnaire used in this study is presented on the following pages (Figure 9).

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[1]David S. Robert, "An Analysis of Instructional Organization and Implementation Strategies in Highly Individualized Elementary Schools Within the Metropolitan Chicago Area." (Mimeographed Research Report, Chicago Consortium of Colleges and Universities, 1976), p. 12.

Open Space Criteria Questionnaire

School Facilities and Usage

In this school the following holds true:

1. Inner walls or partitions are arranged to separate two classroom areas
   a) less than 25% of the linear space
   b) 25% to 50% of the linear space
   c) 51% to 75% of the linear space
   d) more than 75% of the linear space

2. Where movable partitions exist, they are rearranged
   a) at least twice a day
   b) usually once a day
   c) at least twice a week
   d) less than twice a week
   e) none exist at this school

3. In most of the school space, movable partitions separate two neighboring classroom areas
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

4. In this school classes are self contained
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

5. Interaction among students beyond the homeroom grouping occurs
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

6. Students move spacially from their homeroom area
   a) at least twice a day
   b) usually once a day
   c) at least twice a week
   d) less than twice a week

7. Student time schedules are flexible
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

8. The number of students who meet two or more teachers each day is
   a) less than 25%
   b) 25% to 50%
   c) 51% to 75%
   d) more than 75%

9. Teachers plan jointly
   a) less than 25% of the teaching lesson
   b) 25% to 50% of the teaching lesson
   c) 51% to 75% of the teaching lesson
   d) more than 75% of the teaching lesson

10. Cooperative teaching occurs among two or more teachers
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

Figure 9. Criteria Questionnaire designating acceptable usage of open space facilities.

Responses to the Criteria Questionnaire have been categorized into two groups labeled as acceptable and unacceptable. This categorical listing is contained in Appendix E. It reflects common beliefs concerning the open space concepts as expressed in the literature and supported through studies conducted by educational researchers. The general conclusions of this research are as follows:

a) When two classrooms are separated by partitions for more than half the linear space between them, the area is considered open space as long as the partitions are moved at least once a day.

b) Partitions that are not moved do not interfere with open space concepts if they cover less than fifty percent of the dividing line between the classroom areas.

c) Self contained classes violate open space concepts if they remain self contained more than half the time.

d) Some type of interaction among students beyond the home room grouping naturally occurs if classes are not self contained and partitions between rooms are moved every day.

e) If students do not move from their homeroom area daily, the open space concept remains as long as they interact with students outside that area more than half the time.

f) The flexibility of student time schedules is not as clear cut a dimension as the flexibility of student mobility. Authors present opposing views in their findings and recommendations. Breznik found that in the open space Apollo school in Bossier City, Louisiana, traditional time schedules were scrapped and monitoring bells were eliminated. Thus, time schedule flexibility existed for more than 75% of the time.[2] Frazier, on the other hand,

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[2]Roy Breznik, "Venture Into Open Space Learning." A V Guide, 51 (May, 1972), p. 6.

reported that ". . . time for individual effort is found in some schools where an hour is allowed every day or perhaps three times a week for entirely free choice activity."[3] An interpretation of this research suggests that time flexibility in open space can occur less than 25% of the time.

g) Where students interact with others outside of their homeroom area more than half the time, it does not violate the open space concept if they meet with two or more teachers less than half the time.

h) It is not likely that teachers would refuse to communicate with each other when more than half the students meet with two or more teachers each day. Under these circumstances, teachers might not plan jointly for teaching lessons, or perform cooperative teaching for half the time, but would of necessity communicate and cooperate on the use of the open space they share.

Five copies of the Open Space Criteria Questionnaire were sent to the sample schools with the request that the principal, the assistant principal, and three teachers from different grade levels respond. Sixteen of the schools responded. The responses were gridded and analyzed in relation to the categorical listing of answers. Differences of opinion were judged in favor of the majority. Differences among grade levels were explained as a reflection of diverse "house rules" in each open space pod. In such cases, the response from the principal was used to sway the decision. A sample grid with responses is presented in Figure 10. The school depicted conforms to the open space concept with

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[3]Alexander Frazier, Open Schools for Children (Washington, D. C.: Association for Supervision and Curriculum Development, 1972), p. 43.

Q	A	P	AP	PGT	IGT	UGT	Q	A	P	AP	PGT	IGT	UGT
1	(a)	X	X	X	X	X	6	(a)	X	X	X	X	X
	b							b					
	c							c					
	d							d					
2	a						7	(a)	X	X	X	X	X
	b							b					
	c							c					
	d							d					
	(e)	X	X	X	X	X							
3	(a)	X	X	X	X	X	8	a					
	b							b					
	c							c					
	d							(d)	X	X	X	X	X
4	a						9	a			X		
	(b)	X	X		X	X		(b)	X	X		X	X
	c			X				c					
	d							d					
5	a			X			10	a			X		
	b	X						(b)	X	X		X	X
	(c)		X		X	X		c					
	d							d					

Q - Question
A - Answer
P - Principal
AP - Assistant Principal
PGT - Primary Grade Teacher
IGT - Intermediate Grade Teacher
UGT - Upper Grade Teacher

Figure 10. Grid of answers from a typical school satisfying the open space concept

no partitions and classes which are self contained for less than half the time. The first grade class was self contained more often than classes of older children. This practice follows recommendations made by several researchers in the field. As the young become accustomed to the open space, they are allowed more freedom of movement. The primary teachers' answers are consistent throughout. The teachers of older children indicated that interaction outside of the homeroom occurred more than half the time. All respondents indicated that students moved from their homeroom areas at least twice a day on time schedules that were basically inflexible. All agreed that more than three-fourths of the students met with two or more teachers each day. This would indicate that even the first graders met with teachers other than their homeroom teachers. The teachers came to them rather than their moving to different teaching stations. However, the first grade teacher stated that joint planning with other teachers occurred in less than one-fourth of the teaching lessons and cooperative teaching went on during less than one-fourth of the time. Upper grade teachers indicated that joint planning and cooperative teaching had occurred as much as half the time. These answers to question nine and question ten, though exceptions, were acceptable because of the strong response to question eight. This school, labeled "I" in the study, was identified as eligible for inclusion. Other schools were dropped or included in

the sample depending on similar evaluation of their gridded responses to the Criteria Questionnaire.

From the original nineteen schools that conformed to the criteria of public, suburban, both primary and intermediate, and in operation for at least five years, four schools were dropped because they did not satisfy the Open Space Criteria as stated in the Questionnaire. These four schools were deficient in the dimensions of the open space concept.

Two additional schools were deleted from the sample. The principals stated that their schools were no longer open space facilities as a result of Board of Education action. In these schools, partitions had been installed and a self contained organization was mandated.

One school was precluded from participation in the survey based on local district policy. The district policy of non-participation was established because too many studies had infringed on the time of principals and teachers.

The final number of sample schools was twelve. The twelve sample schools are public, suburban, elementary schools containing both primary and intermediate classes, in operation for at least five years, and still following the accepted dimensions of the open space concept.

Each of the twelve sample schools was visited. The principals were interviewed concerning the purpose of the study and their role and responsibilities as administrators

in open space facilities. The evaluation instruments for principal and teachers were given to the principal and explained. Directions for completion were also provided. The evaluation instruments included the following:

1) Principal's Personal Inventory
2) Reddin Management Style Diagnosis Test
3) Teacher's Personal Inventory
4) Halpin and Croft Organizational Climate Description Questionnaire
5) Open Space Criteria Questionnaire.

Procedures for completion and a time for returning the evaluation data was established and mutually agreed upon.

During the first visit, most principals provided a tour of the school facilities. This personal inspection added insight into the later analysis of the Open Space Criteria Questionnaire and evaluation of the data submitted. The results of the evaluation instruments were reviewed and appraised individually so as to yield the most significant data possible. Both manual and electronic approaches were utilized. The personal inventories were tallied and run through the Loyola Computer Laboratory to obtain statistical averages. The MSDT was hand scored and tabulated. The OCDQ was sent to Dr. Andrew E. Hayes at the University of North Carolina for scoring, normalizing, and tabulating. Finally, statistical evaluation was completed with the assistance of the Loyola Computer Laboratory. From the statistical data and available evidence, conclusions were drawn and related to the hypotheses for substantiation or rejection.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The results of the questionnaires used to elicit information relating to open space personnel were organized, tabulated, and mathematically evaluated. The intent was to secure objective data which could be applied to the hypotheses of this study in either a supportive or negative manner. This chapter presents the objective data compiled from this research and evaluation.

The leadership style of managers is depicted by the Reddin Management Style Diagnosis Test (MSDT) with numerical and descriptive ratings for three independent dimensions: task orientation (TO), relationships orientation (RO), and effectiveness (E). Ratings varying from 0.0 to 2.0 are considered low; those varying from 2.0 to 4.0 are rated high. In his work, Reddin stated his expectations regarding manager responses to the MSDT: "The test is designed so that about fifty percent of managers obtain a score below two on any of the three Dimensions."[1] Specific data related to the twelve sample schools are listed in Table 1. These

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[1]William J. Reddin, Management Style Diagnosis Test, 2nd ed. (Fredericton, N. B., Canada: Organizational Tests, LTD., 1977), p. 2.

School	TO	RO	E	TO	RO	E
A	0.6	3.0	3.6	Low	High	High
B	1.8	4.0	4.0	Low	High	High
C	0.6	3.0	3.6	Low	High	High
D	1.8	2.4	3.0	Low	High	High
E	1.8	2.4	2.4	Low	High	High
F	0.0	4.0	4.0	Low	High	High
G	3.0	4.0	1.8	High	High	Low
H	0.0	3.0	3.6	Low	High	High
I	0.6	4.0	3.6	Low	High	High
J	1.2	1.2	2.4	Low	Low	High
K	2.4	1.2	1.8	High	Low	Low
L	1.2	3.0	3.0	Low	High	High

Table 1. Dimension Scores for Sample Principals in Task Orientation, Relationships Orientation, and Effectiveness with High/Low Designation.

data translate to High/Low data depending on the values listed above 2.0 and below 2.0. These High and Low values are also listed in Table 1. When data are presented in this manner certain results emerge. Among the twelve open space principals of the sample, 83% (10) rated low TO while only 17% (2) rated high TO. Hence, most of the sample principals showed less interest towards task orientation than do managers throughout industry. Furthermore, in the present sample, a basic pattern appears. Although TO and RO are independent leadership dimensions, each occurring equally often among managers generally, the open space principals of the sample schools measured low TO with high RO in almost all cases. The measure of RO showed 83% (10) of the principals rated high RO while only 17% (2) rated low RO. Most of the sample principals favored a high relationships orientation. These open space principals thought more of working with people than of getting the job done. An interpretation of the comparative aspects of the data for TO and RO relates to the first hypothesis.

HYPOTHESIS I - Principals of open space schools are more concerned with relationships orientation than with task orientation.

Applying Fisher's "t" for testing a difference between uncorrelated means in two samples of equal size to the TO and RO data from Table 1 results in t = 20.06, with

22 degrees of freedom. This result indicates a level of significance beyond the customary .01 level.[2] These data substantiate the first hypothesis.

A third leadership dimension presented by Reddin is that of effectiveness. This dimension also measures either high or low. In the present sample 83% of the principals rated high E while 17% rated low E. The two principals with low effectiveness also measured high task orientation. All the remaining principals measuring high in effectiveness measured low in task orientation. A summary of these percentages has been presented in Table 2. These data suggest that open space principals favor low task orientation, high relationships orientation, and high effectiveness. Combinations of highs and lows in TO, RO, and E, yield eight leadership styles which are presented in the second hypothesis.

HYPOTHESIS II - The leadership style of principals in open space elementary schools is equally distributed among eight categories: executive, benevolent autocrat, bureaucrat, developer, compromiser, autocrat, missionary, and deserter.

Reddin's Management Style Diagnosis Test provided the basis for the assumption of the second hypothesis:

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[2] J. P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill Book Company, 1965), p. 580.

Value	TO		RO		E	
	N	%	N	%	N	%
Low	10	83	2	17	2	17
High	2	17	10	83	10	83
Totals	12	100	12	100	12	100

Table 2. Frequencies and Percents for High/Low Designation of Task Orientation, Relationships Orientation, and Effectiveness for Sample Principals.

> The eight styles of 3-D Theory are designed to give a clear and comprehensive picture of the managerial world. Implicit in the 3-D Theory is the assumption that all eight styles have an equal chance of occurring and, thus, if a sufficiently large number of managers in a sufficiently diverse number of companies were tested, then an equal number of each style would be obtained. The test is constructed so that each of the eight styles will occur about equally often in a large group of managers chosen from all levels in several different companies.[3]

Identification of the eight styles of leadership depends on high or low task orientation, relationships orientation, and effectiveness. This pattern of identification is established in Table 3 according to the First Principle of Combinatorics.[4] Specific combinations resulting from the data of the sample schools is presented in Table 4 where managerial style is identified for each principal. Despite the predicted possibility of equal distribution, the data for the sample indicates that 75% of the principals are identified as Developers. One principal is rated a Bureaucrat; one, a Compromiser; and one, an Autocrat. A frequency distribution of the twelve sample principal managerial styles has been listed in Table 5. Applying the chi square test to the data of Table 5 results in $X^2 = 44.01$. This value strongly negates the null hypothesis for 7 degrees of freedom beyond the 18.475 value for the .01

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[3]Reddin, MSDT, p. 5.

[4]Z. A. Melzak, Mathematical Ideas, Modeling and Applications (New York: John Wiley & Sons, 1976), p. 169.

Leadership Style	TO	RO	E
Executive	High	High	High
Benevolent Autocrat	High	Low	High
Developer	Low	High	High
Bureaucrat	Low	Low	High
Compromiser	High	High	Low
Autocrat	High	Low	Low
Missionary	Low	High	Low
Deserter	Low	Low	Low

Table 3. Eight Leadership Styles Established According to High/Low Designation for Task Orientation, Relationships Orientation, and Effectiveness.

School	TO	RO	E	Leadership Style
A	Low	High	High	Developer
B	Low	High	High	Developer
C	Low	High	High	Developer
D	Low	High	High	Developer
E	Low	High	High	Developer
F	Low	High	High	Developer
G	High	High	Low	Compromiser
H	Low	High	High	Developer
I	Low	High	High	Developer
J	Low	Low	High	Bureaucrat
K	High	Low	Low	Autocrat
L	Low	High	High	Developer

Table 4. Managerial Styles of Principals from the Twelve Sample Open Space Schools

Leadership Style	N	%	N	%
More Effective			10	83
Executive	0	0		
Benevolent Autocrat	0	0		
Developer	9	75.0		
Bureaucrat	1	8.3		
Less Effective			2	17
Compromiser	1	8.3		
Autocrat	1	8.3		
Missionary	0	0		
Deserter	0	0		
Totals	12	100	12	100

Table 5. Managerial Style Synthesis with Frequency and Percent Distribution.

level.[5] Based on these statistics, Hypothesis II must be rejected.

The third leadership dimension measured by Reddin's MSDT is effectiveness. The study of this dimension is presented in the third hypothesis.

HYPOTHESIS III - Principals of open space elementary schools select a less effective leadership style as often as a more effective style.

Reddin assumed that all leadership styles are equally possible. Therefore, distribution among the four less effective styles, Compromiser, Autocrat, Missionary, and Deserter, should have been equal to the distribution among the four more effective leadership styles, Executive, Benevolent Autocrat, Developer, and Bureaucrat. In the present study this did not occur. The data presented in column E in Table 1 and summarized by the frequency of distribution in Table 5 indicate that 83% of the principals selected a more effective style of leadership, Developer and Bureaucrat, while only 17% chose a less effective style, Compromiser and Autocrat. The chi square test data for effectiveness yields $X^2 = 5.34$, which shows a significance beyond the value of 3.841 at the .05 level

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[5]Guilford, op. cit., p. 582.

for one degree of freedom.[6] Since the null hypothesis is denied, Hypothesis III is rejected.

When the administrative leader consciously pays attention to setting good relationships with his staff, it can be expected that then that staff would show personal satisfaction with the way the school operates. This aspect of interdependence is explored in the next hypothesis.

HYPOTHESIS IV - Principals of open space elementary schools display a high concern for relationships orientation when members of their staffs show high satisfaction in their individual attitudes toward the organization.

The fourth hypothesis compares data from the Reddin Management Style Diagnosis Test (MSDT) with data from (OCDQ), the Halpin and Croft Organizational Climate Description Questionnaire. Principals' answers for the MSDT have been tabulated in Table 1. Teachers' answers to the sixty-four questions of the OCDQ were computerized and identified for every school with normalized means in each of eight behavior characteristics: DIS (Disengagement), HIN (Hindrance), ESP (Esprit), INT (Intimacy), ALO (Aloofness), PRO (Production Emphasis), THR (Thrust), and also CON (Consideration). The means for each characteristic and each sample school have been listed in Table 6. Halpin

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[6] Ibid.

School	DIS	HIN	ESP	INT	ALO	PRO	THR	CON
A	44	44	53	59	53	39	45	54
B	53	63	48	55	47	51	35	43
C	54	60	47	50	51	47	46	45
D	49	44	53	52	56	43	56	63
E	48	49	53	61	48	46	44	46
F	51	47	51	56	55	42	50	54
G	47	49	55	55	55	36	53	61
H	60	52	44	57	58	48	47	50
I	45	51	50	55	47	45	51	53
J	50	49	49	51	52	43	49	51
K	52	50	46	57	53	46	44	51
L	44	45	57	60	57	36	57	69

Table 6. School Means Normatively Standardized for Eight Behavior Characteristics: Disengagement Hindrance, Esprit, Intimacy, Aloofness, Production Emphasis, Thrust, and Consideration.

and Croft indicated that teacher attitudes toward their own school can be described by studying two of the OCDQ characteristics: Intimacy and Consideration. The average of INT and CON is labeled by Halpin and Croft as SOCIAL NEEDS or Factor I. Hypothesis IV requires a comparison between scores on the principal's relationships orientation and the teachers' SOCIAL NEEDS.

The ranking of RO and Factor I is tabulated in Table 7. Applying Spearman's rank-difference coefficient of correlation to this data yields a value of $p = 0.15$. Since significance for $N = 12$ is .506 at the .05 level, the result indicates that the correlation between RO and Factor I, SOCIAL NEEDS, is not significant.[7] Therefore, Hypothesis IV is rejected. In the sample schools, high teacher satisfaction had no positive correlation with high relationships orientation on the part of the principal.

Administrators with a leadership style that is high in task orientation, would be expected to get the job done through strong control and direction of their staffs. This relationship is tested in the fifth hypothesis.

Hypothesis V - Principals of open space elementary schools possess a high concern for task orientation when their staffs indicate a dependence on a high level of direction and control.

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[7]Ibid., p. 593.

School	RO	I	R_1(RO)	R_2(I)	D	D^2
A	3.0	56	6.5	4	2.5	6.25
B	4.0	49	2.5	11	8.5	72.25
C	3.0	48	6.5	12	5.5	30.25
D	2.4	58	9.5	2.5	7.0	49.00
E	2.4	54	9.5	7.5	2.0	4.00
F	4.0	55	2.5	5	2.5	6.25
G	4.0	58	2.5	2.5	0.0	0.00
H	3.0	54	6.5	7.5	1.0	1.00
I	4.0	54	2.5	7.5	5.0	25.00
J	1.2	51	11.5	10	1.5	2.25
K	1.2	54	11.5	7.5	4.0	16.00
L	3.0	64	6.5	1	5.5	30.25
					ΣD^2 =	242.50

Table 7. Relationships Orientation Compared With Factor I or (SOCIAL NEEDS + (INT + CON)/2) by means of Spearman's Rank-Difference Coefficient of Correlation.

The Halpin and Croft OCDQ identifies dependence of staff on direction and control as SOCIAL CONTROL, Factor III. This factor is obtained by averaging scores in Aloofness and Production Emphasis. The ranking of TO and Factor III is listed in Table 8. Spearman's rank-difference coefficient of correlation results in $p = .0035$ which denies any correlation between TO and Factor III that can be considered significant.[8] Consequently, Hypothesis V is rejected. In this sample, the principal's attitude toward task orientation does not indicate any dependence on the teacher attitude toward direction and control.

Managers who rate highly effective in their style of leadership could be expected to have their staffs display high satisfaction with both job and leadership. This expectation is studied in the last hypothesis.

HYPOTHESIS VI - In open space elementary schools, principals show a high level of managerial effectiveness when their staffs display high satisfaction with job and leadership.

Staff satisfaction with job and leadership is measured by the Halpin and Croft statistic labeled ESPRIT, Factor II. ESPRIT is calculated by adding means for the characteristics Esprit and Thrust and then subtracting

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[8] Ibid.

School	TO	III	R_1	R_2	D	D^2
A	0.6	46	9	10.5	1.5	2.25
B	1.8	49	4	4.5	0.5	0.25
C	0.6	49	9	4.5	4.5	20.25
D	1.8	50	4	2.5	1.5	2.25
E	1.8	47	4	8	4.0	16.00
F	0.0	48	11.5	6.5	5.0	25.00
G	3.0	46	1	10.5	9.5	90.25
H	0.0	53	11.5	1	10.5	110.25
I	0.6	46	9	10.5	1.5	2.25
J	1.2	48	6.5	6.5	0.0	0.00
K	2.4	50	2	2.5	0.5	0.25
L	1.2	46	6.5	10.5	4.5	16.00
					$\sum D^2$ =	285.00

Table 8. Task Orientation Compared With Factor III or SOCIAL CONTROL = (ALO + PRO)/2 by means of Spearman's Rank-Difference Coefficient of Correlation.

means for Disengagement and Hindrance. The effectiveness of a manager is measured by Reddin's MSDT and labeled E. The data for E and Factor II are listed in Table 9. Using Spearman's rank-difference coefficient of correlation on this data yields a value of -.27. The negative sign simply indicates an inverse relationship. However, the numerical value is too small for significance since for $N = 12$, $p = .506$ at level .05.[9] Consequently, Hypothesis VI is rejected. In this sample, where 83% of the principals were rated effective, teacher display of group satisfaction with job and leadership did not rate very high. In fact, one school principal ranking at the top in effectiveness had a staff that ranked lowest in teacher satisfaction, Factor II. Obviously, in the present study, group satisfaction is not closely related to leadership effectiveness.

The statistical data gathered by the two instruments, the MSDT and the OCDQ, submit to further detailed analysis when the results from the six hypotheses are compared. The first two hypotheses, despite their contrary findings, yielded expected results. Hypothesis I predicted that principals of open space schools would be more concerned with relationships orientation than with task orientation. DePaul, using the Reddin instrument with principals, found that over seventy percent of his sample scored high in

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[9]Ibid.

School	E	II	R_1	R_2	D	D^2
A	3.6	10	4.5	4	0.5	0.25
B	4.0	-33	1.5	12	10.5	110.25
C	3.6	-21	4.5	10.5	6.0	36.00
D	3.0	16	7.5	2	5.5	30.25
E	2.4	0	9.5	7	2.5	6.25
F	4.0	3	1.5	6	4.5	20.25
G	1.8	12	11.5	3	8.5	72.25
H	3.6	-21	4.5	10.5	6.0	36.00
I	3.6	5	4.5	5	0.5	0.25
J	2.4	-1	9.5	8	1.5	2.25
K	1.8	-12	11.5	9	2.5	6.25
L	3.0	25	7.5	1	6.5	42.25
					$\sum D^2$ =	362.50

Table 9. Effectiveness Compared With Factor II or ESPRIT = ESP + THR - DIS - HIN by means of Spearman's Rank-Difference Coefficient of Correlation.

relationships orientation.[10] In the present study, eighty-three percent of the sample principals reflected similar results, high relationships orientation. In achieving their position of leadership, principals do so by showing consideration for others. Since principals deal more with people than with products, they can be expected to pay more attention to people than to tasks.

Considering the strong conclusions of Hypothesis I showing that most open space principals favored a positive relationships orientation, the eight leadership styles of Hypothesis II could not have resulted in equal distribution. The expression of Hypothesis II as a null hypothesis was based on Reddin's claim that equal distribution would occur ". . . in a large group of managers chosen from all levels in several different companies."[11] Undoubtedly, the group of principals in the present study was not large enough to yield an equal distribution. Furthermore, the group and the levels of management were not varied enough. Reddin's recommendation of "several companies" could not apply to the sample schools. Consequently, because of the obvious

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[10]Frank J. DePaul, "A Study of the Perceived Leadership Styles of Principals in ESEA Title I and Non Title I Elementary Schools in Chicago" (unpublished Ed. D. dissertation, University of Illinois, 1975), p. 63.

[11]Reddin, MSDT, p. 5.

similarity of the sample schools, the negation of the null hypothesis (Hypothesis II) could be accepted and understood.

Nevertheless, the frequency of a single style of leadership, the Developer style, was surprising. This style was displayed by seventy-five percent of the sample principals. This approximately doubles the results obtained by DePaul's study where forty percent of sample principals favored the Developer style of leadership.[12]

While the majority of the present sample group viewed themselves as the same (as indicated by the results), three principals identified their leadership styles as something different: Principal K - Autocrat, Principal J - Bureaucrat, and Principal G - Compromiser. The data for this diverse group of principals and schools was scrutinized to discover possible similarities among them. Since their leadership styles were different, values for TO, RO, and E would be expected to differ. The Compromiser was high in task orientation (TO), high in relationships orientation (RO), but low in effectiveness (E). The Bureaucrat was just the opposite: low in TO, low in RO, but high in E. The Autocrat was a combination of high TO, low RO, and low E. The comparison of these ratings is listed in Table 10. There were no similarities for the three principals in

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[12]DePaul, op. cit., p. 64.

School	Leadership Style	TO	RO	E
G	Compromiser	High	High	High
J	Bureaucrat	Low	Low	High
K	Autocrat	High	Low	Low

Table 10. Tabulation of Leadership Dimensions: Task Orientation, Relationships Orientation, and Effectiveness for the Diverse Group of Sample Principals - Those Not Rated as Developers.

this Diverse Group in any of the three leadership dimensions measured by Reddin's MSDT.

Comparing values of these dimensions for all twelve sample principals yielded several interesting points. The Autocrat and the Compromiser were the only principals from the entire sample to have high TO and low E. On the other hand, the Bureaucrat and the Compromiser were the only principals to be low in RO. In order to discover some similarities between these principals with comparable leadership dimensions, an analysis was made of the data collected from the Principal's Personal Inventory. The demographic data was collected during personal interviews with the sample subjects. The Inventory consisted of eighteen questions. The first two questions identified the person and the school. Each has been symbolized in the present study by letters of the alphabet, A through L. The third question concerning the sex of the principal yielded no clue for discussion. Each of the principals in the Diverse Group was male. The two female principals in the sample were both rated Developers. Questions asked in the Principal's Inventory have been reproduced in Table 11. Data for these questions has been tabulated and listed in Table 12. Each of these items will be discussed in detail.

The ages of the Diverse Group of principals indicate a similarity, each falling within the same group, 35 to 39. The average age of the Developer principals fell in the

1. Principal's name

2. School code no.

3. Sex
   1) Female
   2) Male

4. Age nearest birthday
   1) 20-24
   2) 25-29
   3) 30-34
   4) 35-39
   5) 40-44
   6) 45-49
   7) 50-54
   8) 55-59
   9) 60 or more

5. Highest degree held
   1) Bachelors
   2) Masters
   3) Masters plus
   4) Doctoral course work completed
   5) Doctorate

6. Graduate hours completed in Ed. Admin.
   1) 3-12
   2) 13-18
   3) 18 plus
   4) Masters
   5) Doctorate

7. Years of teach. experience
   1) 1- 4
   2) 5- 8
   3) 9-12
   4) 13-16
   5) More

8. Years taught in grades Kdg. - 8th
   1) None
   2) 1- 4
   3) 5- 9
   4) 10-14
   5) More

9. Years of work outside of education
   1) Less 1
   2) 1- 4
   3) 5- 8
   4) 9-12
   5) 13-16
   6) More

10. Years as principal
    1) First
    2) 1- 4
    3) 5- 8
    4) 9-12
    5) 13-16
    6) More

11. Years as principal of traditional facility
    1) None
    2) 1-2
    3) 3-4
    4) 5-6
    5) More

12. Years as principal of school with open space
    1) First
    2) 1-2
    3) 3-4
    4) 5-6
    5) More

13. Years as principal of this school
    1) First
    2) 1- 4
    3) 5- 8
    4) 9-12
    5) 13-14
    6) More

14. Student enrollment at this school

15. Instructional type
    1) Graded
    2) Non-graded
    3) Mixed
    4) Other (specify)

16. Number of classroom teachers

17. Student enrollment in this district
    1) Less
    2) 5,001 to 20,000
    3) 20,001 to 50,000
    4) More

18. No. supervised other than students or secretaries

Table 11. Principal's Personal Inventory Questions.

Schl \ Q#	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
A	3	3	4	1	2	3	4	3	4	1	330	3	12	2	20
B	4	3	4	4	3	1	4	3	3	2	500	2	18	1	24
C	5	3	3	5	3	1	4	4	4	3	559	3	21	2	35
D	8	3	1	2	3	2	4	5	4	3	550	1	23	1	45
E	7	5	5	3	3	4	2	3	2	2	355	2	11	1	25
F	4	2	4	4	3	1	3	2	3	2	350	1	11	1	18
H	7	3	4	4	3	4	4	3	5	3	390	1	15	1	25
I	5	4	5	1	2	3	1	1	1	1	440	4	17	1	26
L	4	3	4	2	3	1	3	4	1	1	478	1	21	3	25
G	4	5	2	2	3	1	3	1	5	3	595	1	23	3	30
J	4	3	3	4	4	1	3	1	4	3	685	1	30	2	65
K	4	3	3	1	2	2	3	2	4	3	380	3	13	2	25
Dev. Grp	5	-	4	11 yrs	3	4 yrs	8 yrs	4 yrs	3.7 yrs	3.2 yrs	439	-	16	*	27
Div. Grp	4	-	3	8 yrs	3	1 yr	6 yrs	()	6.3 yrs	6.5 yrs	553	-	22	**	40
Sample Mean	5	-	-	10 yrs	3	3 yrs	7 yrs	3 yrs	4.3 yrs	4 yrs	468	-	18	***	30

Note: () less than 1 year; * 8,333; ** 20,000; *** 11,250

Table 12. Data Tabulated for the Sample Principals from Their Answers to the Principal's Personal Inventory. Developer Principals and Diverse Principals Grouped Together for Contrast.

interval 40 to 44. Despite this age difference, the formal education of all groups was basically the same. Two of the Diverse Group, the Autocrat and the Bureaucrat, had graduate hours beyond the masters degree, as did half of the group of Developer principals. Interestingly, the Compromiser had a Doctorate that was not in educational administration. As a matter of contrast, all three principals of the Diverse Group had fewer hours in educational administration than fifty-eight percent of the Developers. Only two of the Developers had fewer hours in educational administration than the members of the Diverse Group, both of these being older principals. In the Diverse Group, the Compromiser, with low E, had less than eighteen graduate hours in educational administration. On the other hand, seventy-five percent of the sample principals, all with high E, had more than eighteen graduate hours in educational administration.

Work experience outside of education was not a strong factor in the comparison of the two groups, since the principals of the Diverse Group had minimal experience outside the schoolhouse. The Autocrat had less than four years of such experience, while the other two principals had less than one year. However, half of the principals from the total sample also had less than a year of work experience outside of education. Among those who had some outside work experience, it averaged about 6.5 years.

The three principals from the Diverse Group all had the same basic tenure as principals, from five to eight years. The length of service as an administrator was well within the range of the median for all principals of the sample, 6.5 years. However, the Diverse Group had less tenure than the Developer Group as principals in traditional school buildings. The Autocrat had one to two years in a school built along traditional lines while the Bureaucrat and the Compromiser had none. The group of Developers had an average of 3.8 years as principals of traditional school facilities.

A slight difference was found when studying the principals' work tenure at their present assignments. The principals in the total sample had an average tenure of four years in their present school building. However, the principals in the Diverse Group had an average tenure of 6.5 years. Considering experience as the principal of an open space school, the Compromiser had more experience (eight years) in such a facility than any other sample principal. The Autocrat and the Bureaucrat both had five to six years experience as principals of open space schools. Therefore, the average of the Diverse Group was considerably higher than the 3.6 year average experience in open space schools of the Developer principals.

School size may have been a factor in identifying the Diverse Group. While the Autocrat managed a school

of the same average size as occurred among the Developer principals (380 students compared to 439), the Bureaucrat and Compromiser had student populations far in excess of any other schools. The first school had 685 students, the second had 595. These figures are above the average population of the sample schools: 468 students.

The size of the supportive staff was larger for the Diverse Group, forty adults. The average for the Developer Group was only twenty-seven adults.

A summary of the comparative demographic data between the two groups is presented in Table 13. This summary, together with information presented in Table 10, will be analyzed and interpreted to yield some significant conclusions based on the results of this study.

One observation based on collected information indicates that principals with large school populations tend to be more task oriented. Another observation of these results indicates that principals with experience in traditional space schools show a similar leadership style (Developer) and are more relationships oriented when they become principals of open space facilities.

In rating effectiveness, only two principals of the entire sample were rated less effective. Both of these were in the Diverse Group, Principal G, and Principal K. However, none of the demographic data isolated these two

Diverse Group	Developer Group
All the same age - 35 to 39	Average age of 43
Fewer hours in educational administration	More hours in educational administration
Little or no work experience outside of education	More than half had considerable experience outside of education
Less tenure in traditional space	More tenure in traditional space
More tenure in present school building	Less tenure in present school building
More tenure in open space schools	Less tenure in open space schools
Large school population	Small school population
Large supportive staff	Small supportive staff

Table 13. Comparative Details of Demographic Data for Diverse Group and Developer Group of Principals.

in any positive manner. While they were the same age, had the same tenure span as principals, and the same span as principals in their current assignments, these items were not unique to them. They shared these similarities with other, more effective principals. In other demographic items, they actually differed from each other. Since none of the collected data from the several instruments used in this study are common to the two less effective principals, a basis for predicting less effectiveness is impossible to establish.

Based on the results of this study, it would be reasonable to assume that principals of open space schools would be rated as more effective. A study of the items from the Halpin and Croft Organizational Climate Description Questionnaire leads to a second phase in this comparative analysis.

Scores for the eight behavioral characteristics measured by the OCDQ were ranked from the highest (1) to the lowest (12). The complete results have been listed in Table 14. These rankings were reviewed for possible similarities among principals in the Diverse Group. Two principals, the Compromiser and the Autocrat were previously rated by Reddin's MSDT as "less effective." Unfortunately, the anticipated similarities on the OCDQ ranking did not show up. A portion of Table 14 has been isolated for this comparison:

	DIS	HIN	ESP	INT	ALO	PRO	THR	CON
A	11.5	11.5	4	3	6.5	10	9	4.5
B	3	1	9	8	11.5	1	12	12
C	2	2	10	12	9	3	8	11
D	7	11.5	4	10	3	7.5	2	2
E	8	7	4	1	10	4.5	10.5	10
F	5	9	6	6	4.5	9	5	4.5
H	1	3	12	4.5	1	2	7	9
I	10	4	7	8	11.5	6	4	6
L	11.5	10	1	2	2	11.5	1	1
G	9	7	2	8	4.5	11.5	3	3
J	6	7	8	11	8	7.5	6	7.5
K	4	5	11	4.5	6.5	4.5	10.5	7.5

Table 14. Ranking of Sample Principals in Each of the Eight Behavior Characteristics as Measured by the Halpin and Croft Organizational Climate Description Questionnaire (OCDQ) with the Principals of the Developer Group and the Diverse Group Listed Separately.

	DIS	HIN	ESP	INT	ALO	PRO	THR	CON
G	9	7	2	8	4.5	11.5	3	3
K	4	5	11	4.5	6.5	4.5	10.5	7.5

Hindrance (HIN) is an indication of the feeling that teachers have that the principal burdens them with many unnecessary duties. This teacher attitude would be expected to coincide with a less effective principal leadership style. However, both schools ranked at the middle on HIN. Esprit (ESP) refers to teacher morale. It would be expected that the faculty of a less effective principal would display low morale. This was true of school K, which ranked almost at the bottom, but was completely the opposite with school G, which ranked practically at the top. However, this behavior characteristic ranking was in keeping with the results obtained from rating the relationships orientation dimension of the MSDT since both principals rated oppositely in RO. This observation singles out the fact that the principal of school G rated high in RO and his faculty ranked high in Esprit. Principal K rated low in RO and his faculty ranked low in morale.

The characteristics of Production Emphasis refers to behavior of the principal which is characterized by the close supervision of the staff. School G, with high teacher morale, has low Production Emphasis consistent

with high relationships orientation. In contrast, school K, with low teacher morale, showed a high ranking in Production Emphasis consistent with the principal's display of low relationships orientation. However favorable this comparison of ESP and PRO to the RO dimension of leadership, it amounts to an unfavorable comparison when the leadership dimension of effectiveness is considered. While both principals rated low E, their faculties ranked at opposite ends in Esprit and Production Emphasis.

A similar comparison occurs for another behavior characteristic, Thrust. Thrust refers to behavior on the part of a manager through positive example to move an organization. Principal G with high RO had a faculty which ranked him high in Thrust while the principal of school K with low RO had a faculty ranking him low in Thrust. While this comparison is consistent with high-low relationships orientation, it gives no insight concerning the leadership dimension of effectiveness.

The final behavior characteristic of Consideration, behavior by the principal which is characterized by an inclination to treat the teachers "humanly," yields a similar comparison. Principal G, high in RO, also rated high in Consideration. Principal K, low in RO, was low in Consideration. Unfortunately, this comparison provided no insight to explain low effectiveness.

The other behavior characteristics of the OCDQ did not yield noteworthy information since the rankings were too close to the medians. Principal G and Principal K proved unique among the sample principals in one other area, they were the only principals who rated high in task orientation. In general, while managers who rate high TO can be more effective leaders as often as less effective leaders, these two principals were both rated as less effective. It would appear that among open space principals, those rated high in task orientation are also likely to be rated low in effectiveness.

The only principals of the sample to rate low in the leadership dimension of relationships orientation were Principal J and Principal K, both in the Diverse Group. A comparison between school rankings on the behavior characteristics measured by the OCDQ and the RO dimension as measured by the MSDT deserves consideration. A portion of Table 14 that refers to Principals J and K has been reproduced to make easy the comparison of data:

	DIS	HIN	ESP	INT	ALO	PRO	THR	CON
J	6	7	8	11	8	7.5	6	7.5
K	4	5	11	4.5	6.5	4.5	10.5	7.5

Discrepencies do not show up as often as they did in the discussion of school G and K. Rankings in most behavior characteristics from the OCDQ were similar. In Esprit, Aloofness, Thrust, and Consideration, both schools ranked in the lower sector with most of the sample schools above them in these characteristics. Since both of these principals rated low in relationships orientation, it is not surprising that their faculties ranked low in Esprit, teacher morale. While Aloofness could be expected to have a high ranking, both schools ranked near the median.

Thrust, the behavior characterized by the principal setting the example, could be expected to rank low to coincide with low RO. This was true with school K, whose faculty ranked Thrust very low. This did not hold true with school J where the faculty ranked close to the median in Thrust. Consideration, treating teachers "humanly," should have ranked low to be again consistent with low RO. The two schools ranked exactly the same 7.5, not near the bottom of the spectrum. Both schools ranked near the median of the sample on Disengagement, Hindrance, and Production Emphasis. Intimacy, teacher friendliness, would be expected to rank low as a match to low RO. This holds true for school J whose faculty ranked next to the bottom in INT. However, the faculty of school K ranked just above the median in this behavior characteristic. It can be assumed

that in school K, the teachers carry on personal and friendly relations in spite of the principal's low RO rating. This type of ranking of higher than average Intimacy, coupled with low Thrust was explained by Halpin as follows: "But if the principal is described as low in Thrust, the teachers evidently by-pass the principal and seek satisfaction of their needs in their own way."[13]

Hypothesis IV compared the rating of principals in RO with the ranking of schools in SOCIAL NEEDS. The latter measure is calculated as the average of Intimacy and Consideration, and is labeled Factor I by Halpin and Croft. The results and ranking of the sample schools for Factor I are presented in Table 7. Schools J and K ranked lower than average, 10th and 7.5th. Unfortunately, this ranking is not in keeping with the fact that these two principals rated low in relationships orientation. In this sample, unexpectedly, schools with high RO ranked low in Factor I. Therefore, apparently a ranking of SOCIAL NEEDS cannot predict high or low relationships orientation. Attention needs to be turned to an analysis of the remaining two hypotheses.

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[13]Andrew W. Halpin, Theory and Research in Administration (New York: The Macmillan Company, 1966), p. 219.

Hypothesis V compared the leadership dimension of task orientation with the behavior characteristics that yield SOCIAL CONTROL. This latter measure of direction and control is labeled Factor III by Halpin and Croft and calculated by averaging Aloofness and Production Emphasis. Since Principal G and Principal K were the only two from the entire sample to rate high in TO, a comparison of the two behavior characteristics would be expected to show a positive correlation. Unfortunately, this was not the case. The two schools ranked differently in Aloofness and Production Emphasis. Combining the two into Factor III resulted in school K ranking at the top of the sample schools, while school G ranked near the bottom. These results would indicate that a high rating on the task orientation leadership dimension is not a predictor of high rating on the Halpin and Croft Factor III, SOCIAL CONTROL. This conclusion can be interpreted as follows: principals who are anxious to "get the task done" do not necessarily manipulate their staffs to reach their goal.

Hypothesis VI compared managerial effectiveness with teacher morale. The two schools with the less effective managers were G and K. To measure teacher morale, the Halpin and Croft OCDQ uses four behavior characteristics: Esprit, Thrust, Disengagement, and Hindrance. The first two add to morale while the latter two detract. The result

is labeled Factor II, ESPRIT. The faculty of school K responded in the expected manner. While their principal rated low in effectiveness, they ranked low in Esprit and Thrust, and high in Disengagement and Hindrance. Thus, Factor II correlated positively with low effectiveness for the situation in school K. Unfortunately, the same did not hold true for school G. Faculty G ranked high in Esprit and Thrust, and below the median in Disengagement and Hindrance. Therefore, the expected correlation between principal effectiveness, E, and faculty morale, Factor II, was not established. A further discussion of these results and recommendations which they suggest will be presented in the next chapter.

CHAPTER V

CONCLUSIONS, APPLICATIONS, IMPLICATIONS, AND RECOMMENDATIONS FOR FURTHER STUDY

Conclusions

The purpose of this study was to compare leadership styles of principals with the organizational climates of selected suburban open space elementary schools. The styles of leadership were designated by Reddin's Management Style Diagnosis Test. The test identified eight leadership styles with varying degrees of effectiveness. The less effective styles included the compromiser, missionary, autocrat, and deserter. The more effective styles were identified as executive, benevolent autocrat, bureaucrat, and developer. The organizational climate in the open space schools was measured through the use of data gathered by the Halpin and Croft Organizational Climate Description Questionnaire. The questionnaire yields data which can identify any of eight dimensions of organizational climate, four characterizing teacher behavior: disengagement, hindrance, esprit, and intimacy; and four characterizing principal behavior: aloofness, production emphasis, thrust, and consideration.

Open space schools were selected in accordance with criteria established following careful analysis of

the current literature. The open space concept, as defined in this study, includes four points:

1. An abundance of open space exists with its inherent flexibility of movement;

2. Flexibility in grouping permits student mobility;

3. Communication between open space occupants is easy and frequent; and

4. Teacher planning is a cooperative venture.

The hypotheses were posed with the intention of proving the existence of a link between the leadership style of the principal and the behavioral characteristics of the teachers in open space schools. It was expected that the dimensions of the open space concept would have an influence on the behavior of both the principal and the teachers. The abundance of open space would force people to interact with each other frequently throughout the school day. Such forced interaction would automatically lead to behavior patterns unique to open space occupants. Flexibility in grouping patterns would place demands on the leadership style of the principal unique to the open space setting. Communication patterns established in open space schools would lead to intimate and casual relationships among teachers, and between teachers and principals. Cooperative planning, expected of all teachers, would require personal consideration and engagement. Obviously, each dimension identified with the open space concept

would place unusual demands on the behavior of all, the principal as well as the teachers and students.

Although the sample of this study is relatively small, the results are proportionately significant in that these results show higher figures than mere majorities. The research sample consisted of twelve schools with student enrollments between 330 and 685 pupils. Each school had a principal responsible for only that unit. The faculties consisted of more than ten but no more than thirty teachers. The leadership styles of these principals were remarkably similar. Research data firmly established this conclusion:

HYPOTHESIS I - Principals of open space schools are more concerned with relationships orientation than with task orientation.

Despite the current emphasis on the teaching of reading, and the popular "back to basics" movement, the tasks set by these priorities proved to be of less importance to the principal of an open space school than his attitude towards people. The extent to which a principal directed his own efforts and those of his subordinates was characterized less often by initiating, organizing, and directing (task orientation), than by listening, trusting, and encouraging (relationships orientation). Ten of the sample principals favored relationships orientation (RO) over task orientation (TO) as their style of leadership. Only two of the

principals rated higher in TO than in RO. The data yielded a firm conclusion concerning the first hypothesis: a principal of an open space school can be expected to be sympathetic to others, willing to hear them out as well as to help them in difficulties. A principal of an open space school can be expected to be relationships oriented.

Principals must consider individual differences among all people be they children or adults. Children are expected to progress in school at their own rate of speed. Adults are expected to reach unique decisions and to freely express their personal opinions. Principals, as leaders, are expected to show forethought, directivity, and effective control. In different situations and schools, managerial leadership can hardly be all the same. Reddin identified the eight styles listed in the second hypothesis:

HYPOTHESIS II - The leadership style of principals in open space elementary schools is equally distributed among eight categories: executive, benevolent autocrat, bureaucrat, developer, compromiser, autocrat, missionary, and deserter.

This hypothesis was rejected. From the choices available, most principals of the sample schools identified with a single leadership style: developer. Therefore, the data asserted that to be effective leaders in open space elementary schools, principals generally displayed the

leadership style of a developer, accepting others as they are. As a developer, the principal spends much time in conversations with others getting to know them better. Information gained from such conversations can be used to better understand the needs of staff and subordinates. Time spent in becoming better acquainted is time well spent. To a developer principal, organizations are primarily social systems available for developing greater understanding and rapport among individual members of that organization. The developer probably judges his superiors by the warmth they show to their subordinates. As developer, he undoubtedly will find it unpleasant to work without personal contact with his staff. As leader, the developer will expect others to follow his example in getting along well together. The developer can be expected to correct the mistakes of others by pleasantly offering suggestions. Finally, the developer principal is likely to feel that the greatest punishment he can administer to a subordinate is to show a complete loss of interest in him, ignoring him as a person.

Every principal approaches a new assignment with planned determination to be effective. Despite this positive attitude, not all leaders are effective in every situation. Reddin suggested that among all managers in all situations only fifty percent are likely to be rated as having a "more effective" leadership style. This suggestion relates to principals in the third hypothesis:

HYPOTHESIS III - Principals of open space elementary schools select a less effective leadership style as often as a more effective style.

This was not so among the principals in the sample schools. Eighty-three percent of the principals rated "more effective" in their leadership style. Whatever selection pattern superintendents used for choosing their principals in the sample schools, their choices generally became effective leaders. In conclusion, the principal of an open space school can be expected to develop effectively the strengths of his staff and to be a positive source of influence, overcoming conflict with pleasantness. Principals of open space schools can be expected to show effective leadership.

The fourth hypothesis stated that a leadership style showing high concern for personal relationships on the part of the principal would be linked with a feeling of satisfaction with the school as an organization on the part of the teacher.

HYPOTHESIS IV - Principals of open space elementary schools display a high concern for relationships orientation when members of their staffs show high satisfaction in their individual attitudes toward the organization.

The data did not support this assumption. Teacher attitudes toward intimacy and consideration did not score

high in schools where relationships orientation was high. On the other hand, in no sample school were these teacher attitudes (called social needs) rated low. However, the school with the highest score in social needs did not have the principal who rated highest in relationships orientation. It must be concluded from the data of this study that teacher attitudes of satisfaction toward their school as an organization cannot be predicted from the leadership style of the principal.

The fifth hypothesis sought to explore the effect of another type of leadership, that which stresses the importance of task over relationships, on teacher attitude toward social control:

HYPOTHESIS V - Principals of open space elementary schools possess a high concern for task orientation when their staffs indicate a dependence on a high level of direction and control.

The expected dependence proved to be non-existent in the sample schools. While most of the principals showed little inclination toward task orientation, most of the teachers showed little recognition of social control. The data for both characteristics were lower than data presented for relationships orientation and for teacher attitudes as indicated by social needs. The principal ranking highest in task orientation had a faculty that ranked lowest in

social control. The reverse was also true. The faculty ranking highest in social control had a principal who ranked lowest in task orientation. Beyond these two schools, an inverse relation was not present, for the principal who ranked second highest in task orientation had a faculty that ranked second highest in social control. The rest of the sample schools yielded data of little or no comparative value. One can only conclude that among the sample open space schools there was no predictable relationship between a principal's leadership style which favors task orientation and the dependence of staff on direction and control. Based on the relatively low values of social control data, it can be further concluded that teachers in open space schools favor direction and control less than they favor intimacy and consideration.

It had been expected that effectiveness on the part of an open space principal would be reflected positively in satisfaction among teachers concerning their job and their principal's leadership. Hence, the last hypothesis:

HYPOTHESIS VI - In open space elementary schools, principals show a high level of managerial effectiveness when their staffs display high satisfaction with both job and leadership.

The data did not bear out this hypothesis. While the measure of managerial effectiveness proved high for

almost all sample principals, the measure of satisfaction of job proved to be quite low. Ranking comparisons yielded little information. In two schools, where principals ranked at the top in effectiveness, the faculties varied widely in satisfaction, one ranking in the middle, the other, at the bottom. This lack of correlation led to the conclusion that there was no direct relationship in the sample schools between a principal's leadership effectiveness and staff's satisfaction with job.

In summary, the following conclusions have been reached based on the results of this study:

1. Principals of open space schools are more concerned with relationships orientation than with task orientation.

2. The leadership style of principals in open space elementary schools is not equally distributed among eight categories: executive, benevolent autocrat, developer, bureaucrat, compromiser, autocrat, missionary, and deserter. The principals of the sample schools favored one style, that of developer.

3. Principals of open space elementary schools did not select a less effective leadership style as often as a more effective style. Most principals of the sample schools selected a more effective style of leadership.

4. There was no correlation between a principal's concern for relationships orientation and teachers' show

of high satisfaction in their individual attitudes toward their open space elementary schools.

5. There was no correlation between a principal's concern for task orientation and teachers' dependence on a high level of direction and control in their open space elementary schools.

6. There was no correlation between principal's managerial effectiveness and teachers' satisfaction with job and leadership in their open space elementary schools.

Application To The Training Of Principals

The first three hypotheses explored the leadership styles of principals in open space elementary schools. The study of the literature and research applicable to the topic suggested that principals in the sample schools would have more concern for personal relationships than for task accomplishments, process over task. The sample schools, because of their physical arrangements, would demand significant interrelationships among all occupants: pupils, teachers, teacher aides, and principals. While the task of working towards their mutual goal, the successful graduate, could not be ignored, it was expected that task accomplishment would be less important to principals of open space schools than the relationships between staff members. Consequently, the first hypothesis anticipated

that the principals of the sample schools would be far more concerned with relationships orientation than with task orientation. The results of this study showed this to be true.

The statistical data which supported the first hypothesis were sound and significant. The data proved that open space principals are people who accept others as they find them. Open space principals are relationships oriented, putting a higher value on people while tending to de-emphasize the importance of the organization and its technology. It would therefore seem reasonable that educational administration training programs for principals of open space facilities should include courses focusing on human relationships. Maslow's Hierarchy of Needs must be thoroughly understood in both theory and practice. The worth of a human being develops as the needs in the hierarchy are satisfied, step by step. An open space principal can assure greater productivity from his staff members as he satisfies or attempts to satisfy the needs identified by Maslow. The principal can expect teachers to respond with greater effort when they recognize his attempts to help them. On the other hand, teachers will quickly recognize the lack of personal attention when their needs are ignored.

By recognizing staff members as individual human beings rather than merely a unified whole, the open space

school principal can create relationships which preclude problems. He can staff teaching teams with compatible members. He can change members when trouble occurs in team relationships. He can be expected to intervene as required to keep teams functioning smoothly.

The open space principal must also recognize that children are more than mere statistics. Young children need to be introduced to open space gradually to assure that they do not get lost in its immensity. This suggests programming Headstart and kindergarden children into some smaller nooks or rooms. Hence, the supervisory training of principal candidates requires the study of the needs of children in open space as much as the needs of adults.

Despite the fact that the statistics of this study found relationships orientation rating higher than task orientation with open space principals, the independence of these two orientations must be acknowledged. Every manager, to some degree, displays fundamental chracteristics from both of the orientations. While the principal listens, thrusts, and encourages (characteristics of relationships orientation), he also initiates, organizes, and directs (characteristics of task orientation). The importance of job knowledge and technical skill is implicit in task orientation. It is impossible to imagine any manager, who lacks technical skills, being able to initiate, direct, and organize his own work, let alone that of others. The

development of the skills required for task accomplishment must also be an integral part of any training program for candidates for the principalship of an open space facility.

The second hypothesis anticipated that a variety of leadership styles would be found among the principals of open space schools. Managers in industry and commerce have been known to reflect just such a variety. The Reddin Management Style Diagnosis Test identifies eight different styles designated to give a clear and comprehensive picture of the managerial world. The compromiser functions as a poor decision maker, one who allows various pressures in a situation to influence him too much. He minimizes immediate pressures and problems rather than maximizing long term production. The autocrat has no confidence in others, and therefore is usually unpleasant. He shows interest in the immediate job rather than in the totality of organizational goals. The missionary uses high relationships orientation and low task orientation in the situation where such behavior is inappropriate. This type of leader is primarily interested in harmony among all staff members.

The leader who is labeled a deserter uses low task orientation and low relationships orientation in any type of situation where such minimal response results in abandonment of responsibility. He is seen as uninvolved

and passive. At the opposite end of the scale is the executive type of leader. He uses high relationships orientation and high task orientation in situations where these behaviors are purposeful and productive. He is a strong motivator who sets high standards. As executive, he prefers team management to individual indecisiveness, capitalizing on strengths within his staff.

The benevolent autocrat uses high task orientation and low relationships orientation. He appears to know what he wants and how to get it done without creating resentment or resistance. The bureaucrat, using low task orientation along with low relationships orientation is primarily interested in rules and regulations for their own sake. He maintains effective control of the situation by enforcing the rules and regulations. The bureaucrat is seen as a conscientious manager. High relationships orientation with low task orientation are characteristic of the developer. This manager reflects implicit trust in people and is primarily concerned with developing them as individuals to their fullest potential.

The definitive qualities of the leadership style called developer would be assumed to be those of an open space principal. However, the assumption of the Reddin test was that the eight leadership styles would be equally distributed among all managers. Reddin's study suggests that the eight styles could be expected to have an equal

chance of occurring if a sufficiently large number of managers in a sufficiently diverse number of companies and organizations were tested. Consequently, the second hypothesis assumed that each of the eight styles would occur equally often among the sample school principals. The data from the present study did not support this second hypothesis. The results pointed to a single leadership style, developer, as most favored by open space principals. Consequently, training programs for candidates of the open space school principalship must include the study of those behavior characteristics inherent in developers.

The developer's mode of communication is through conversation. Consequently, the trainee must learn to listen since listening is the most important step in a relationships oriented conversation. The developer shows little concern for time when it is necessary to continue communicating with subordinates. Candidate trainees need to develop patience as well as warmth and kindness. The developer judges his superiors by the warmth they may show to others. He fears rejection by others. He also fears the appearance of conflict, so he seeks to avoid the situations that inflame conflict. On the other hand, his main weakness is sentimentality which may lead to a breakdown in authority. Trainees must become aware of these subjective behaviors and prepare to counter them when necessary.

The role of the developer in committee activities is supportive, both harmonizing and coaching. Open space teachers experience daily committee-like team activities. Principals must be familiar with the committee syndrome as well as with their own responsibilities in stimulating the situation in the open space setting. Showing support and patience is a behavior to be understood and practiced by each trainee.

Finally, the developer's source of control comes from using praise and/or rejection. Trainees must learn that praise within earshot of others multiplies its value, but public rejection is damning. Correction of errors should be made in private. The developer would not berate the careless subordinate, he would rather offer positive suggestions for improvement flashing a knowing smile that says "I know you can do it." The developer may find any output difficult to evaluate in the short run, but expects subordinates to possess and to display a high degree of professional skill and a strong commitment to established goals. The developer expects subordinates to decide on their own what creative and unusual techniques they can find to accomplish their set goals. The candidate for the principalship must understand these behavioral characteristics in order to become an effective leader in an open space school.

The assumption of the third hypothesis expected principals of open space schools to follow patterns set by managers throughout industry and commerce. All managers studied by Reddin were as likely to rate "less effective" as "more effective." The results of the present study indicate that the sample principals did not follow this predicted pattern. As a matter of fact, considerably more open space principals were rated "more effective" than "less effective." The present study accepts Reddin's definition of effectiveness as the extent to which a manager achieves the output requirements of his position. Thus, the manager must understand the importance of output rather than the input of the job. Unfortunately, most managerial jobs are defined in terms of the input. In such instances, behavior requirements are stated in such phrases as: he administers, he maintains, he organizes, he plans. In order to set effectiveness standards for the manager, the organization needs to revolve around the outputs of the manager. This leads to management by objectives. The primary responsibility of the open space principal is to identify the goals and objectives of his school. Next, he must set up assessment techniques for measuring the extent to which these output goals and objectives have been achieved. The candidate for an open space principalship must study the method of management by objectives with its recommendations for managerial effectiveness.

Candidate trainees need to distinguish between managerial effectiveness and "apparent effectiveness" and/or "personal effectiveness." Apparent effectiveness is distinguished by the following managerial behavior: usually on time, answers communications promptly, has a tidy desk, makes quick decisions, and good at public relations. Unfortunately, apparent effectiveness may or may not lead to managerial effectiveness. However, the opposite behavior pattern will surely lead to obvious ineffectiveness: always late, long delays in communication and decision making, poor public relations, a mountain of "lost" papers on an untidy desk. A second form of leader effectiveness, called personal effectiveness, results from satisfying personal objectives rather than organizational objectives. If the personal objectives differ from the organizational objectives, managerial ineffectiveness will most likely result. On the other hand, when these personal objectives coincide closely with the goals and objectives of the organization, the manager will find professional effectiveness yields personal satisfaction. Managerial effectiveness is measured by the extent to which a manager fulfills the requirements of his position. The open space principal may not be a manager in the accepted meaning as defined in the business community. Nevertheless, he is seen by most people, particularly his staff, as primarily responsible for achieving the school's objectives. His

success or effectiveness depends on his sensitivity to the situation, the flexibility of his leadership style, and his knowledge and use of managerial skills. Candidates for the open space principalship must study these three aspects of managerial effectiveness.

In general, the managerial situation includes organization, technology, superiors, coworkers, and also, subordinates. In the case of open space principals, the situation is delineated by the organizational status often dictated by the rules of the local board of education; technology is apparent in the innovative school building and its equipment; the superiors include the district superintendent, assistant and associate superintendents; coworkers include other principals in the district, parent representatives, and members of the PTA or educational council; and the subordinates are the teachers and teacher aides. All of these situational elements demand unique responses from the principal to assure positive managerial effectiveness. The leadership trainee in an open space setting must become familiar with such situational demands before accepting the responsibilities of direction and control. Such training must be designed to develop the situational sensitivity needed to be an effective principal in open space.

Flexibility of leadership style rather than style rigidity leads to managerial effectiveness. When leaders

are task dominated, they tend to become rigid in their managerial style. While this study found most open space principals favoring a relationships orientation rather than a task orientation, style rigidity should be avoided. Candidates for open space leadership roles may need to develop the potential for many leadership styles despite the fact that this study found most open space principals favored a single style, that of the developer. The data from this study proved significantly that the developer style was the dominant style most often used by the open space principals of the sample schools. The results did not preclude the use of other styles as needed in specific situations. In fact, the findings of overall effectiveness among open space principals implied that a high degree of style flexibility did exist in open space.

Candidates for leadership in open space schools need to become familiar with the techniques and skills found useful for effective management. The often used practice of promotion from the ranks into a leadership role without necessary inservice and preparation is not a promotion but a step toward almost certain disaster. Similarly, lateral movement from a traditional school leadership role to an open space principalship requires inservice sufficient to develop situational sensitivity, style flexibility, and managerial skills necessary for effective leadership in open space. The role of manager

is an active role rather than a passive one. To become effective, a manager must recognize his need to control the situation as well as himself and his actions.

The principal who shows enthusiasm for his job can expect his staff to reflect that enthusiasm. To make this happen, the principal must somehow inspire himself, finding activities that can build within him the feeling of inspiration and enthusiasm for his leadership role. The popular joke about the principal being the "bad boy" who daily resists the chore of attending school should be no more than that, a silly little joke. Principals, like others in education, need occasional pep talks. It is within reason that such pep talks, leading to increased enthusiasm for the job, can be self-induced. The principal needs to look at successful achievements due to his style of leadership while avoiding overindulgence in self-pity concerning occasional failures.

The fourth hypothesis looked for a link between a principal's leadership style, rated as relationships oriented, and teacher satisfaction. It was expected that when a principal would show high concern for the personal and social needs of his staff, the teachers in turn would reflect high satisfaction toward the school. The essence of relationships orientation lies in a close personal link between manager and staff. The manager listens to the needs of subordinates. He encourages them to share with

him their desires and dissatisfactions. He anticipates their wants and often acts to satisfy their requests even before they are made. He shows consideration for each person as a person before criticising any deficiencies. He cajoles more often than he demands. The manager who consciously uses a relationships orientation style of leadership will strive to create an aura of friendliness among his staff members.

Personal satisfaction may not always be reflected in group morale. A cliche of long repute points to high morale existing in the army when the soldiers have many things to complain about. Just as long as the individual soldiers can identify with each other as having common complaints, the morale of the army as a whole unit can be considered high and acceptable. In the same situation, the individual soldier, when pinned down to a definite choice, may sheepishly admit that his life in the army is acceptable despite his complaints. The same holds with teachers. They may complain about their scheduled duties, the students in their classes, and the huge quantity of papers they correct. However, when pressed for a definite choice for or against, they, too, will undoubtedly respond with an all inclusive "ok." There remains one distinction between military service and teaching. In the military a high wall exists between all officers and enlisted men. Fraternization is not allowed. This is quite the contrary

with principals and teachers, who usually have friendly relations, especially in open space schools. The military propose that any fraternization would break down morale in general and the line of command in particular. The military thrive on task orientation and accomplishment and contend that friendliness and fraternization breaks down blind obedience to commands. Since the military are training for times of emergency, rules against any display of fraternization and friendliness between officers and enlisted men can be understood and accepted. However, in teaching, no such emergencies exist. It can hardly be expected that the principal-teacher relationship in open space schools can in any way preclude appropriate action in any emergency situation where blind obedience would become necessary. Except for the occasion of a fire or disaster drill, the usual interaction between principal and teacher comes about from situations that require much thought and consideration. Passing or failing a student is not a frivolous decision, but one that comes from a long term consideration. Similarly, with other problems that are likely to occur in the school, it is not likely that blind obedience would ever be absolutely necessary.

Despite the obvious low key atmosphere that exists in principal-teacher interactions, there are proponents who would build barriers between the two. The principal, they say, should treat the teachers in the same way that

teachers treat their students. The teacher does not hold class to have all the students like him, but rather to have children learn their lessons. Some teachers feel that if it takes a ruthless, dictator-like image to make the student learn, then that image needs to be implemented at all levels. In keeping with this line of reasoning, the principal cannot be friends with the teachers and expect them to respect him as a leader. While this is a viable approach to the principalship, it is not the type of relationship found in the sample open space schools. The principal did not rule the roost ruthlessly to keep "henpecked" teachers forever functioning. In fact, the open space principal was friendly and courteous to his staff. The question the fourth hypothesis asked was: under the condition of the existence of a friendly and concerned principal, did the teachers respond with a feeling of high personal satisfaction toward their school and their jobs. Unfortunately, the present study found no significant correlation between teacher attitudes as identified by the Halpin and Croft Organizational Climate Description Questionnaire and the principal's leadership styles as established by the Reddin Management Style Diagnosis Test. Nevertheless, the results suggest certain aspects of principal-teacher relationships that need to be a part of any training program for principal candidates. The fourth hypothesis explored the extent to which intimacy

and consideration were experienced by teachers in the sample open space schools. Intimacy was a measure of the teachers' enjoyment of friendly social relations with each other. This dimension described satisfaction with social needs regardless of possible or probable connections with task accomplishment. According to the data of the study all schools scored high in the behavior characteristic identified as intimacy. On a school by school basis, scores in intimacy were higher than for any other characteristic. This suggests that in open space schools principals satisfy the need "to accept and foster the feeling of friendliness" among their staffs. Obviously, pressure for task accomplishment was not popular among the open space teachers in the sample schools. Hence, principal candidates must place into proper perspective the desire and the need for task accomplishment as compared with the practicality of relationships orientation in open space elementary schools.

Consideration was the second Halpin and Croft behavioral characteristic that rated high scores among open space teachers. This characteristic indicated that teachers viewed their principal's behavior as friendly and humane. Hence, principal candidates need to become aware of the characteristic behavior of the considerate principal. A primary response towards personal contact between principal and teacher was that of listening.

The principal had to listen with interest to the teacher's conversation. The most considerate approach was a simple eye-to-eye contact with the teacher while listening. The trainee must deliberately practice this form of listening in order to show consideration for future subordinates. In addition to the spoken word, the trainee must study human behavior in order to identify body language that may tell more than the spoken word. Furthermore, this candidate must be aware of ethnic differences. While WASPish customs make eye-to-eye contact comfortable for many, other ethnicities forbid such contact as most rude and discourteous. Certain cultures teach that eye-to-eye contact is intimate and suggestive. Unless the trainee becomes familiar with these ethnic differences, he is likely to offend rather than show consideration to those with whom he will be working.

The fifth hypothesis sought to link a principal's concern for task orientation with teacher desire for and acceptance of social control. It had been expected that the nature of the leadership style called task oriented would evoke a feeling of dependence among teachers upon a high level of direction and control. Despite the fact that most principals in the sample schools scored high in relationships orientation, each had a companion score in task orientation. This score measured that principal's desire to get the task done, no matter what. Teachers,

too, feel the need to get the task done, as evidenced by the popularity of lesson plans and daily task schedules. Some teachers are even more concerned with meeting a task deadline than the manner in which the task is accomplished. They may sacrifice a variety of lesson offerings in order to concentrate on teaching only one subject, for example, reading. If reading scores are to be improved, then time may be spent on reading at the expense of other curricular offerings. The task will be accomplished, no matter what. This attitude of accomplishing the task no matter what is often extended down to the level of the classroom. There, every day, students are urged to finish their assignments. Every day, new assignments are handed down to them. Even in the open class atmosphere as epitomized in the British primary schools, each task assignment is accepted as a matter of course. Although the student may have the final say as to the choice of assignment, the task assignment, with its completion deadline, becomes accepted procedure. Students and teachers, as well as principal, have reason to be concerned about meeting deadlines. When deadlines are missed, a sense of blame must fall somewhere. Students often blame a teacher for making the assignments too hard, the time too short, or the explanation incomprehensible. Teachers may feel the same. When their tasks fail to reach satisfactory conclusions within the time deadline set, teachers may look to the principal for excuses. If

the principal is a task master showing strong direction and control emphasis, teachers can hide their own lack of accomplishment as students try to do by blaming the "poor" direction of their leader. Teachers, who seek to place all blame on their principal, need a leader who exhibits a high level of direction and control. The fifth hypothesis expected that despite low levels of task orientation among sample principals, these levels would correlate with the measure of social control among teachers. However, the data showed no such link to exist. Nevertheless, the school means for production emphasis, a characteristic of social control, point out that teachers from the sample schools held less concern for this behavior characteristic than any other. It would appear that in open space schools the teachers seldom referred to their principal as the "straw boss." They did not see him as highly directive where the communication went only one way - down to them. They found communication easy with their principal who eagerly listened for feedback information. This result strengthens the need for a training program that would prepare the principal candidate for the type of freedom in communication channels that can be found in open space. Trainees need to experience working with subordinates in give and take situations that foster flexibility in leadership styles. They must recognize that issuing direct

orders would not find favor among teachers in open space elementary schools.

Another component characteristic of social control is that called aloofness. Among the sample schools this component was neither the most nor the least favored of the behavior characteristics. Aloofness referred to behavior by the principal which was characterized as formal and impersonal. The aloof principal preferred to be guided by rules and regulations rather than to deal with teachers on an informal, face-to-face basis. In brief, the aloof principal would be universalistic rather than particularistic; nomothetic rather than idiosyncratic. In the sample schools, teachers found their principals less than aloof, but neither overly sympathetic nor emotionally involved. Principal candidates need to be aware of the pitfalls of the extremes: too aloof and/or too sympathetic. Emotional involvement with the teachers can lead to a breakdown in leadership authority. On the other hand, utter aloofness can lead to a breakdown in respect for leadership commands. Teachers in open space schools expect their principals to be more humane than mechanical.

The final hypothesis compared the principal's effectiveness with faculty morale. It had been expected that when a principal rated highly effective, his faculty would have displayed a high degree of satisfaction with both their job and his leadership. Satisfaction can be equated

with a feeling of status quo. When things are running well, when goals are being met, then workers are satisfied in leaving things as they are. Under such circumstances both manager and employees can reflect their individual satisfaction in the leadership that has been provided and the job being done. On the other hand, when employees find fault with the leadership, they often will display their dissatisfaction by grumbling and complaining. They, as workers, find the leadership ineffective. They feel individually unable to cope. Collectively, they display low morale. With workers dissatisfied, the manager cannot stay immune to the need for improvement. To be effective, the manager must change his style of leadership or continue to lose control of the situation. Consequently, it would be expected that in the case of open space schools, teacher morale and principal effectiveness would show strong ties. Despite the fact that faculty morale would be measured by the Halpin and Croft questionnaire, while principal effectiveness would be measured by the Reddin test, the data from the sixth hypothesis should have produced a close link between morale and effectiveness. Unfortunately, this was not the case. Although a significant correlation was not established between principal's effectiveness and teacher morale, the data do suggest certain topics that deserve inclusion in training programs. Specific behavior characteristics resulting from the study of

faculty morale suggest certain topics as important and necessary for a well-rounded training program. Halpin and Croft measured faculty morale by combining four of their behavioral characteristics. This combination, a measure of group morale, was called ESPRIT or Factor II. Two of the behavior characteristics detracted from a high measure of group morale. These two were aptly labeled disengagement and hindrance. Under the first characteristic, teachers tended to disengage themselves from the situation while merely going through the motions without being really interested. Since this aspect of teacher behavior dealt with task oriented situations, it was not surprising that open space school teachers did not score especially high in disengagement. Open space principals displayed little enthusiasm for task orientation, hence they could expect their faculties to be only moderately disposed toward disengagement.

Hindrance was a dimension of behavior reflecting teacher feeling toward the burdens imposed by principals upon them. While data indicate that open space teachers felt a little resentment towards their ordinary duties, they did not score high in hindrance. In fact, the scores, while moderate, were not high enough to significantly affect faculty morale. In the calculation of Factor II, disengagement and hindrance scores were subtacted from scores of esprit and thrust, two characteristics that

added to group morale. Esprit referred to individual teacher morale or personal satisfaction. When teachers felt their social needs were being satisfied and when they experienced a sense of accomplishment in their job, they added their positive, personal feelings to improve general faculty morale. Thrust, on the other hand, was the behavior of a principal which was characterized by his evident effort to move the organization toward the established goals. Using thrust, the principal motivated teachers through his personal example. This characteristic was strictly task oriented. Consequently, the teachers in the sample open space schools did not rate thrust very high. Neither did they rate thrust very low. In training courses for principal candidates, the need for leading by example should not be ignored. The open space principal can expect his teachers to follow his example whenever he strives to satisfy both social and work-oriented needs. The trainee must be made aware of this aspect of leadership.

The training of candidates for the open space principalship can occur in workshops, summer institutes, or graduate courses. This training can be sponsored by school districts, professional organizations, universities, and/or local, state, or national educational agencies. It can be directed toward those teachers planning to step into administrative positions, assistant principals, or graduate students in education. While such formal training

can be assumed to be most beneficial to candidates prior to an assignment in an open space school, sessions for those already assigned could prove equally beneficial. Inservice sessions can be even more useful since practical problems and personal experiences can be used to set the pace for the training program.

Administrators of open space schools are forced by the physical setting into a relationships oriented style of leadership. Programs set up to train candidates for the open space principalship must include the study of: human relations, patterns of child growth and development, behavioral responses, organizational models, management techniques, and supervisory skills. The candidate must experience the give and take communication patter that yields positive human relationships. To listen is to learn. To listen is to allow the employee the satisfaction of being heard. To listen is an important aspect of the two-way communication network that improves a relationships orientation.

Children respond to open space differently depending on their ages. The candidate must study these differences to be able to respond from knowledge when related problems occur in open space. Children and adults display particular behavior patterns in certain situations. Therefore, the study of behavioral responses is a must for the open space administrator trainee.

Open space principalship candidates must develop organizational skills that can yield task accomplishment without destroying relationships orientation. They can be expected to understand the technique of management by objectives. To be successful and effective in open space, the candidates must develop the sensitivity and style flexibility that each situation demands. Supervision in open space depends on praise and support. As a future supervisor, the managerial trainee needs to practice the patience that a future in open space demands.

Pre-service and in-service programs satisfy a need for all involved in open space. These training programs are especially necessary for those who plan to be the leaders in these unique educational facilities.

Implications

The rate of change from the egg-crate schools of yesterday to the open space schools of today increased throughout the 1960's and 1970's. Although the movement has continually gathered speed, the open space concept continues to be for many an unproven challenge to tradition. Yet, the concept has followers who have defended their positive stand for acceptance throughout the literature.

The first requirement for developing the open space

concept is the open space itself. The normally existent walls separating classroom areas are either removed or not installed in the first place. Two, three, or more classroom units function side by side without any dividers to separate them. Student groups no longer meet with just one teacher for the full day. Students meet different teachers for each subject with as much ease as walking across the "big room."

Open space schools have been erected for a variety of reasons. The open structure satisfies curricular needs of the modern world. The new open type structure permits effective use of personnel at a time of teacher shortages. Experienced teachers are able to share techniques and methods with neophytes. The "wall-less" stuctures reduce over-extended school budgets. Flexibility of open space has been a viable commitment to the dynamics of modern educational policies.

In the midst of open space, the building principal must draw upon unique managerial skills to keep accepted concepts functional. This study has concluded that the typical open space elementary principal possesses personal feelings for the welfare of the people who work for him. He leads by suggestion rather than dictation. Open space affects both principals and teachers. As a result of this study, the following implications are noted:

1. Educators with an empathy for subordinates often become effective principals of open space schools.
2. Principals and superintendents who favor the open space concept need to guard against the subterfuge of subordinates erecting artificial barriers which militate against the open space philosophy.
3. Positive human interaction is fostered by the effective principal in an open space school among all personally involved.
4. Class size becomes extremely flexible in an open space school.
5. Teachers need little direction or control in open space schools.
6. Open space schools tend to have large, non-teaching, supportive staffs.
7. Principals of open space schools can expect considerable spacial movement on the part of both students and teachers.
8. Teachers in schools favoring the open space concept cannot expect to teach self-contained classes.
9. Principals' effectiveness in open space schools is not dependent upon teacher satisfaction.

Recommendations For Further Study

The role of principal in an open space elementary school is a challenging one. For many parents and teachers the concept of open space is still a relatively new and uncertain departure from the self-contained classes with which they are familiar. Only limited studies exist that address themselves to these issues. Research has shown that teachers in open space schools differ little from teachers in traditional space concerning job satisfaction. Other studies have yielded extremely contradictory results. The present study found significant results concerning the leadership styles of principals in open space schools. But the same data yielded dubious results concerning teacher attitudes in open space schools. While the data concerning teacher job satisfaction and leadership needs proved to be less than significant, these data did raise a number of questions. Based on the analysis of data and conclusions reached in this study, the following areas are recommended for further research:

1. Comparisons and contrasts in leadership styles between principals of open space schools and traditional schools.
2. Correlation between a principal's leadership style and school size.

3. Longitudinal study of principals' leadership style as related to tenure in the same school.
4. Adjustment of leadership style in change of assignment, either to another open space school or to a traditional school.
5. Similarities and differences in leadership styles between open space principals in urban areas as compared to suburban areas.
6. Importance of graduate study in educational administration and leadership style.
7. Correlation of leadership style and principal's ethnicity, sex, age differences.
8. Differences in leadership style and/or climate factors between rehabilitated buildings and newly erected open space buildings.
9. Relationship of teacher job satisfaction to principal's leadership style.
10. Effect of teacher inservice on job satisfaction in open space schools.
11. Difference in teacher attitudes depending upon volunteer or directed assignment into open space.
12. Variety of instruments available for assessing leadership style and teacher attitude.

In closing, the following quotation is appropriate:

> Can a traditionally educated, traditionally oriented, traditionally complacent staff work effectively in an open classroom? Based upon empirical evidence the answer is a resounding, emphatic "No!" Unless our schools are staffed and led by people with open minds, the open classroom may be a pretty place, but it will be an educational farce.[1]

During this time of educational change and challenge, the open space concept presents a viable alternative setting for consideration in meeting the needs of all children.

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[1]Melvin P. Heller and Ed T. Rancic, "Open Classrooms Need Open Minds," Momentum, 4 (February, 1973), p. 38.

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APPENDIX A

1. Principal's name

2. School code no.

3. Sex
   1) Female
   2) Male

4. Age nearest birthday
   1) 20-24
   2) 25-29
   3) 30-34
   4) 35-39
   5) 40-44
   6) 45-49
   7) 50-54
   8) 55-59
   9) 60 or more

5. Highest degree held
   1) Bachelors
   2) Masters
   3) Masters plus
   4) Doctoral course work completed
   5) Doctorate

6. Graduate hours completed in Ed. Admin.
   1) 3-12
   2) 13-18
   3) 18 plus
   4) Masters
   5) Doctorate

7. Years of teach. experience
   1) 1- 4
   2) 5- 8
   3) 9-12
   4) 13-16
   5) More

8. Years taught in grades Kdg.-8th
   1) None
   2) 1- 4
   3) 5- 9
   4) 10-14
   5) More

9. Years of work outside of education
   1) Less 1
   2) 1- 4
   3) 5- 8
   4) 9-12
   5) 13-16
   6) More

10. Years as principal
    1) First
    2) 1- 4
    3) 5- 8
    4) 9-12
    5) 13-16
    6) More

11. Years as principal of traditional facility
    1) None
    2) 1-2
    3) 3-4
    4) 5-6
    5) More

12. Years as principal of school with open space
    1) First
    2) 1-2
    3) 3-4
    4) 5-6
    5) More

13. Years as principal of this school
    1) First
    2) 1- 4
    3) 5- 8
    4) 9-12
    5) 13-14
    6) More

14. Student enrollment at this school

15. Instructional type
    1) Graded
    2) Non-graded
    3) Mixed
    4) Other (specify)

16. Number of classroom teachers

17. Student enrollment in this district
    1) Less
    2) 5,001 to 20,000
    3) 20,001 to 50,000
    4) More

18. No. supervised other than students or secretaries

Principal's Personal Inventory Questionnaire.

APPENDIX B

No._____

TEACHER'S PERSONAL INVENTORY

1. School Name_____

2. Address _____ District Number

3. City _____ Phone_____

4. Sex

____1) Female

____2) Male

5. Age nearest birthday

____1) 20-24

____2) 25-29

____3) 30-34

____4) 35-39

____5) 40-44

____6) 45-49

____7) 50-54

____8) 55-59

____9) 60 & +

6. Highest degree

____1) Bachelors

____2) Masters

____3) Masters +

____4) Doctoral course work completed

____5) Doctorate

7. Years of teaching experience

____1) first

____2) 1-4

____3) 5-8

____4) 9-12

____5) 13-16

____6) more (specify)

8. Years of teaching in open space

____1) first

____2) 1-2

____3) 3-4

____4) 5-6

____5) more (specify)

9. Years as teacher in this school

____1) first

____2) 1-2

____3) 3-4

____4) 5-6

____5) more (specify)

10. Number of students supervised

____1) 1-10

____2) 11-15

____3) 16-20

____4) 21-25

____5) 26-30

____6) more (specify)

11. Grade or age level in your class

____1) Primary (Kdg-2)

____2) Middle (3-6)

____3) 1) & 2)

____4) Other (specify)

12. Instructional type of class

____1) graded

____2) non-graded

____3) mixed

____4) other (specify)

APPENDIX C

QUESTIONNAIRE

(1) A He overlooks violations of rules if he is sure that no one else knows of the violations.
B When he announces an unpopular decision, he may explain to his subordinates that his own boss has made the decision.

(2) A If an employee's work is continually unsatisfactory, he would wait for an opportunity to have him transferred rather than dismiss him.
B If one of his subordinates is not a part of the group, he will go out of his way to have the others befriend him.

(3) A When the boss gives an unpopular order, he thinks it is fair that it should carry the boss's name, and not his own.
B He usually reaches his decisions independently, and then informs his subordinates of them.

(4) A If he is reprimanded by his superiors, he calls his subordinates together and passes it on to them.
B He always gives the most difficult jobs to his most experienced workers.

(5) A He allows discussions to get off the point quite frequently.
B He encourages subordinates to make suggestions, but does not often initiate action from them.

(6) A He sometimes thinks that his own feelings and attitudes are as important as the job.
B He allows his subordinates to participate in decision making, and always abides by the decision of the majority.

(7) A When the quality or quantity of departmental work is not satisfactory, he explains to his subordinates that his own boss is not satisfied, and that they must improve their work.
B He reaches his decisions independently, and then tries to "sell" them to his subordinates.

(8) A When he announces an unpopular decision, he may explain to his subordinates that his own boss has made the decision.
B He may allow his subordinates to participate in decision making, but he reserves the right to make the final decision.

(9) A He may give difficult jobs to inexperienced subordinates, but if they get into trouble he will relieve them of the responsibility.
B When the quality or quantity of departmental work is not satisfactory, he explains to his subordinates that his own boss is not satisfied, and that they must improve their work.

(10) A He feels it is as important for his subordinates to like him as it is for them to work hard.
B He lets other people handle jobs by themselves, even though they may make many mistakes.

(11) A He shows an interest in his subordinates' personal lives because he feels they expect it of him.
B He feels it is not always necessary for subordinates to understand why they do something, as long as they do it.

(12) A He believes that disciplining subordinates will not improve the quality or quantity of their work in the long run.
B When confronted with a difficult problem, he attempts to reach a solution which will be at least partly acceptable to all concerned.

(13) A He thinks that some of his subordinates are unhappy, and tries to do something about it.
B He looks after his own work, and feels it is up to higher management to develop new ideas.

(14) A He is in favour of increased fringe benefits for management and labor.
B He shows concern for increasing his subordinates' knowledge of the job and the company, even though it is not necessary in their present position.

(15) A He lets other people handle jobs by themselves, even though they make many mistakes.
B He makes decisions independently, but may consider reasonable suggestions from his subordinates to improve them if he asks for them.

(16) A If one of his subordinates is not a part of the group, he will go out of his way to have the others befriend him.
B When an employee is unable to complete a task, he helps him to arrive at a solution.

(17) A He believes that one of the uses of discipline is to set an example for other workers.
B He sometimes thinks that his own feelings and attitudes are as important as the job.

(18) A He disapproves of unnecessary talking among his subordinates while they are working.
B He is in favour of increased fringe benefits for management and labor.

(19) A He is always aware of lateness and absenteeism.
B He believes that unions may try to undermine the authority of management.

(20) A He sometimes opposes union grievances as a matter of principle.
B He feels that grievances are inevitable and tries to smooth them over as best he can.

William J. Reddin, Management Style Diagnosis Test.

(21) A It is important to him to get credit for his own good ideas.
B He voices his own opinions in public only if he feels that others will agree with him.

(22) A He believes that unions may try to undermine the authority of management.
B He believes that frequent conferences with individuals are helpful in their development.

(23) A He feels it is not always necessary for subordinates to understand why they do something, as long as they do it.
B He feels that time-clocks reduce tardiness.

(24) A He usually reaches his decision independently, and then informs his subordinates of them.
B He feels that unions and management are working towards similar goals.

(25) A He favors the use of individual incentive payment schemes.
B He allows discussions to get off the point quite frequently.

(26) A He takes pride in the fact that he would not usually ask someone to do a job he would not do himself.
B He thinks that some of his subordinates are unhappy, and tries to do something about it.

(27) A If a job is urgent, he might go ahead and tell someone to do it, even though additional safety equipment is needed.
B It is important to him to get credit for his own good ideas.

(28) A His goal is to get the work done without antagonizing anyone more than he has to.
B He may assign jobs without much regard for experience or ability but insists on getting results.

(29) A He may assign jobs without much regard for experience or ability but insists on getting results.
B He listens patiently to complaints and grievances, but often does little to rectify them.

(30) A He feels that grievances are inevitable and tries to smooth them over as best he can.
B He is confident that his subordinates will do satisfactory work without any pressure from him.

(31) A When confronted with a difficult problem, he attempts to reach a solution which will be at least partly acceptable to all concerned.
B He believes that training through on the job experience is more useful than theoretical education.

(32) A He always gives the most difficult jobs to his most experienced workers.
B He believes in promotion only in accordance with ability.

(33) A He feels that problems among his workers will usually solve themselves without interference from him.
B If he is reprimanded by his superiors, he calls his subordinates together and passes it on to them.

(34) A He is not concerned with what his employees do outside of working hours.
B He believes that disciplining subordinates will not improve the quality or quantity of their work in the long run.

(35) A He passes no more information to higher management than they ask for.
B He sometimes opposes union grievances as a matter of principle.

(36) A He sometimes hesitates to make a decision which will be unpopular with his subordinates.
B His goal is to get the work done without antagonizing anyone more than he has to.

(37) A He listens patiently to complaints and grievances, but often does little to rectify them.
B He sometimes hesitates to make a decision which he feels will be unpopular with his subordinates.

(38) A He voices his own opinions in public only if he feels that others will agree with him.
B Most of his subordinates could carry on their jobs without him if necessary.

(39) A He looks after his own work, and feels it is up to higher management to develop new ideas.
B When he gives orders, he sets a time limit for them to be carried out.

(40) A He encourages subordinates to make suggestions, but does not often initiate action from them.
B He tries to put his workers at ease when talking to them.

(41) A In discussion he presents the facts as he sees them, and leaves others to draw their own conclusions.
B When the boss gives an unpopular order, he thinks it is fair that it should carry the boss's name, and not his own.

(42) A When unwanted work has to be done, he asks for volunteers before assigning it.
B He shows an interest in his subordinates' personal lives because he feels they expect it of him.

(43) A He is as much interested in keeping his employees happy as in getting them to do their work.
B He is always aware of lateness and absenteeism.

(44) A Most of his subordinates could carry on their jobs without him if necessary.
B If a job is urgent, he might go ahead and tell someone to do it, even though additional safety equipment is needed.

(45) A He is confident that his subordinates will do satisfactory work without any pressure from him.
B He passes no more information to higher management than they ask for.

(46) A He believes that frequent conferences with individuals are helpful in their development.
B He is as much interested in keeping his employees happy as in getting them to do their work.

(47) A He shows concern for increasing his subordinates' knowledge of the job and the company, even though it is not necessary in their present position.
B He keeps a very close watch on workers who get behind or do unsatisfactory work.

(48) A He allows his subordinates to participate in decision making, and always abides by the decision of the majority.
B He makes his subordinates work hard, but tries to make sure that they usually get a fair deal from higher management.

(49) A He feels that all workers on the same job should receive the same pay.
B If any employee's work is continually unsatisfactory, he would wait for an opportunity to have him transferred rather than dismiss him.

(50) A He feels that the goals of union and management are in opposition but tries not to make his view obvious.
B He feels it is as important for his subordinates to like him as it is for them to work hard.

(51) A He keeps a very close watch on workers who get behind or do unsatisfactory work.
B He disapproves of unnecessary talking among his subordinates while they are working.

(52) A When he gives orders, he sets a time limit for them to be carried out.
B He takes pride in the fact that he would not usually ask someone to do a job he would not do himself.

(53) A He believes that training through on the job experience is more useful than theoretical education.
B He is not concerned with what his employees do outside of working hours.

(54) A He feels that time-clocks reduce tardiness.
B He allows his subordinates to participate in decision making, and always abides by the decision of the majority.

(55) A He makes decisions independently, but may consider reasonable suggestions from his subordinates to improve them if he asks for them.
B He feels that the goals of union and management are in opposition but tries not to make his view obvious.

(56) A He reaches his decisions independently, and then tries to "sell" them to his subordinates.
B When possible he forms work teams out of people who are already good friends.

(57) A He would not hesitate to hire a handicapped worker if he felt he could learn the job.
B He overlooks violations of rules if he is sure that no one else knows of the violations.

(58) A When possible he forms work teams out of people who are already good friends.
B He may give difficult jobs to inexperienced subordinates, but if they get in trouble he will relieve them of the responsibility.

(59) A He makes his subordinates work hard, but tries to make sure that they usually get a fair deal from higher management.
B He believes that one of the uses of discipline is to set an example for other workers.

(60) A He tries to put his workers at ease when talking to them.
B He favors the use of individual incentive payment schemes.

(61) A He believes in promotion only in accordance with ability.
B He feels that problems among his workers will usually solve themselves without interference from him.

(62) A He feels that unions and management are working towards similar goals.
B In discussion he presents the facts as he sees them and leaves others to draw their own conclusions.

(63) A When an employee is unable to complete a task, he helps him to arrive at a solution.
B He feels that all workers on the same job should receive the same pay.

(64) A He may allow his subordinates to participate in decision making, but he reserves the right to make the final decision.
B He would not hesitate to hire a handicapped worker if he felt he could learn the job.

APPENDIX D

THE ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE, FORM IV

Directions: Circle the response in the right column that most nearly represents your perception.

A. Rarely occurs
B. Sometimes occurs
C. Often occurs
D. Very frequently occurs

	Circle Best Response
1. Teachers' closest friends are other faculty members at this school....	A B C D
2. The mannerisms of teachers at this school are annoying.....	A B C D
3. Teachers spend time after school with students who have individual problems.....	A B C D
4. Instructions for the operation of teaching aids are available.....	A B C D
5. Teachers invite other faculty members to visit them at home..	A B C D
6. There is a minority group of teachers who always oppose the majority.....	A B C D
7. Extra books are available for classroom use.....	A B C D
8. Sufficient time is given to prepare administrative reports...	A B C D
9. Teachers know the family background of other faculty members.	A B C D
10. Teachers exert group pressure on nonconforming faculty members.....	A B C D
11. In faculty meetings, there is the feeling of "let's get things done."...	A B C D
12. Administrative paper work is burdensome at this school.....	A B C D
13. Teachers talk about their personal life to other faculty members.....	A B C D
14. Teachers seek special favors from the principal.....	A B C D
15. School supplies are readily available for use in classwork...	A B C D
16. Student progress reports require too much work.....	A B C D
17. Teachers have fun socializing together during school time....	A B C D
18. Teachers interrupt other faculty members who are talking in staff meetings.....	A B C D
19. Most of the teachers here accept the faults of their colleagues.....	A B C D

A. Rarely occurs
B. Sometimes occurs
C. Often occurs
D. Very frequently occurs

20. Teachers have too many committee requirements.....A B C D
21. There is considerable laughter when teachers gather informally.....A B C D
22. Teachers ask nonsensical questions in faculty meetings.....A B C D
23. Custodial service is available when needed.....A B C D
24. Routine duties interfere with the job of teaching.....A B C D
25. Teachers prepare administrative reports by themselves.....A B C D
26. Teachers ramble when they talk in faculty meetings.....A B C D
27. Teachers at this school show much school spirit.....A B C D
28. The principal goes out of his way to help teachers.....A B C D
29. The principal helps teachers solve personal problems.....A B C D
30. The teachers at this school stay by themselves.....A B C D
31. Teachers accomplish their work with great vim, vigor, and pleasure.....A B C D
32. The principal sets an example by working hard himself.....A B C D
33. The principal does personal favors for teachers.....A B C D
34. Teachers eat lunch by themselves in their own classrooms.....A B C D
35. The morale of teachers is high.....A B C D
36. The principal uses constructive criticism.....A B C D
37. The principal stays after school to help teachers finish their work....A B C D
38. Teachers socialize together in small select groups.....A B C D
39. The principal makes all class-scheduling decisions.....A B C D
40. Teachers are contacted by the principal each day.....A B C D
41. The principal is well prepared when he speaks at school functions.....A B C D
42. The principal helps staff members settle minor differences...A B C D
43. The principal schedules work for the teachers.....A B C D

A. Rarely occurs
B. Sometimes occurs
C. Often occurs
D. Very frequently occurs

44. Teachers leave the grounds during the school day.....A B C D

45. The principal insures that teachers work to their full capacity....A B C D

46. Teachers help select which courses will be taught.....A B C D

47. The principal corrects teachers' mistakes.....A B C D

48. The principal talks a great deal.....A B C D

49. The principal explains his reasons for criticism to teachers.A B C D

50. The principal tries to get better working conditions for teachers.....A B C D

51. Extra duty for teachers is posted conspicuously.....A B C D

52. The rules set by the principal are never questioned.....A B C D

53. The principal looks out for the personal welfare of teachers.A B C D

54. School secretarial service is available for teachers' use....A B C D

55. The principal runs the faculty meeting like a business conference.....A B C D

56. The principal is in the building before teachers arrive.....A B C D

57. Teachers work together preparing administrative reports.....A B C D

58. Faculty meetings are organized according to a tight agenda...A B C D

59. Faculty meetings are mainly principal-report meetings.....A B C D

60. The principal tells teachers of new ideas he has run across..A B C D

61. Teachers talk about leaving the school system.....A B C D

62. The principal checks the subject-matter ability of teachers..A B C D

63. The principal is easy to understand.....A B C D

64. Teachers are informed of the results of a supervisor's visit.A B C D

Please check your Questionnaire and Inventory to ascertain that all items have been covered.

Thank you for your cooperation and assistance in this research.

APPENDIX E

Open Space Criteria Questionnaire

School Facilities and Usage

In this school the following holds true:

1. Inner walls or partitions are arranged to separate two classroom areas
   a) less than 25% of the linear space
   b) 25% to 50% of the linear space
   c) 51% to 75% of the linear space
   d) more than 75% of the linear space

2. Where moveable partitions exist, they are rearranged
   a) at least twice a day
   b) usually once a day
   c) at least twice a week
   d) less than twice a week
   e) none exist at this school

3. In most of the school space, moveable partitions separate two neighboring classroom areas
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

4. In this school classes are self contained
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

5. Interaction among students beyond the homeroom grouping occurs
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

6. Students move spacially from their homeroom area
   a) at least twice a day
   b) usually once a day
   c) at least twice a week
   d) less than twice a week

7. Student time schedules are flexible
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

8. The number of students who meet two or more teachers each day is
   a) less than 25%
   b) 25% to 50%
   c) 51% to 75%
   d) more than 75%

9. Teachers plan jointly
   a) less than 25% of the teaching lesson
   b) 25% to 50% of the teaching lesson
   c) 51% to 75% of the teaching lesson
   d) more than 75% of the teaching lesson

10. Cooperative teaching occurs among two or more teachers
   a) less than 25% of the time
   b) 25% to 50% of the time
   c) 51% to 75% of the time
   d) more than 75% of the time

Acceptable Answers

The following would be answers considered acceptable to the premise that the school is used as an open space school:

1a or 1b

2a, 2b, or 2e

3a or 3b

4a or 4b

5c or 5d

6a or 6b

7a, 7b, 7c, or 7d

8c or 8d

9c or 9d

10c or 10d

Unacceptable Answers

The following would be answers considered unacceptable to the premise that the school is used as an open space school:

1c or 1d unless coupled with 2a or 2b

2c or 2d unless with 1a or 1b

3c or 3d unless with 1a or 2a

4c or 4d

5a unless with 4a or 2a
5b unless with 4a or 4b

6c or 6d unless with 5c or 5d

7 none are necessary factors

8a unless with 5d
8b unless with 5c or 5d

9a unless with 8d
9b unless with 8c or 8d

10a unless with 8d

10b unless with 8c or 8d

APPROVAL SHEET

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

Date

Director's Signature