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The Relationship Between The Bases of Power of The Principal and Indicators of School Effectiveness

by

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CURRICULUM STUDIORUM

David C. Cross was born on July 27, 1946, in Yorkton, Saskatchewan. He obtained a Bachelor of Arts degree with a major in Biology from the University of Saskatchewan in 1967. He obtained a Bachelor of Education degree in 1974 and a Master of Education degree with specialization in administration in 1982 also from the University of Saskatchewan. The M.Ed. thesis was entitled Principal Assessment: A Case Study of Two Urban Saskatchewan School Divisions.

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Abstract of:

The Relationship Between Bases of Power of the Principal and Indicators of School Effectiveness

The study explored the relationship between the bases of a principal's power and indicators of school effectiveness as mediated by school social climate. Specifically, the problem investigated were:

1) How is the perceived use by the principal of these bases of power related to factors associated with effective schools?
2) Does this relationship change if the perception of group atmosphere changes?

French and Raven's bases of power, the literature dealing with effective schools, and the literature dealing with Fiedler's Group Atmosphere Scale provided the theoretical framework for the study.

The population of this investigation comprised elementary school teachers and principals in the province of Ontario, Canada. Data were collected from a sample of 432 teachers and 62 principals in 63 schools. Three instruments were used to collect the information required to test the research hypotheses. The independent variable, bases of a principal's power, was measured by the teacher's perceptions as measured by the Bases of Power Questionnaire. This instrument is a modified version of an instrument used by Richmond, M^{c} Croskey, Davis and Koontz (1980). The dependent variable, indicators of school effectiveness, was measured by requesting teachers' responses to the Schweitzer Questionnaire (Schweitzer, 1984). The mediating variable, school social climate was measured by the

teachers' preceptions as reported in the Group Atmosphere Scale (Fiedler, 1967).

The relationship between power bases and indicators of effectiveness was analyzed by means of simple correlations. The mediating effect that social climate has on the relationship between power bases and indicators of school effectiveness was determined through step-wise multiple regression with significance set at the .05 level of probability of committing a type I error.

It was found that the visionary and information bases of a principals power were moderately positively correlated with the following indicators of effective schools: 1) administrative leadership of instruction, 2) use of assessment instruments, and 3) emphasis on achievement. The expertise and referent bases of a principal's power were moderately positively correlated with: administrative leadership of instruction and a positive, orderly school environment.

When school social climate was used to partition schools into those whose social climate is more and less positive, it was found that the principals' perceived use of visionary and expertise power as well as their perceived lack of of use of legitimate and coercive power were the best predicators of overall school effectiveness. It was found that the correlations between those power bases and overall school effectiveness were stronger in schools with a less positive social climate.

The importance of principals' clear articulation of goals and purposes for the school and the principals' provision of useful information to teachers, especially in a supportive, non-coercive manner is indicated by the findings of this study. This seems especially so for schools with a

less positive social climate. This finding implies a type of "charismatic" instructional leader is needed in such schools. Raven's (1971) reformulation of power bases to include information power was given some support by this study's findings. The Schweitzer Questionnaire seems a useful instrument to determine effective schools. It requires, however, a confirmation in Canadian schools, that it is related to student achievement. More investigation of the nature of the behaviours of principals who are perceived as using each power base is also required.

INTRODUCTION

The usefulness of the concept of power for the study of social life seems indisputable (Swingle, 1976; Wrong, 1979; Nyberg, 1981). Power is present in social relations of all kinds. It is a central element in organizations and is fundamental to schooling (Michael and Spady, 1983; Muth, 1984). What power is and what power includes are, however, still subjects of great debate (Ng, 1980). It has been suggested that power is a basic, if not the most basic, element in human relations (Muth, 1984, p. 25).

French and Raven (1959), as well as others (Blau and Scott, 1962; Peabody, 1962; Harsanyi, 1962), have stressed that any power and influence relationship, including leadership, must be seen as an exchange in which both parties must give and take (Tannenbaum, 1968; Jacobs, 1970). The leaders' power always depends to some degree on their acceptance by their group members and the group members' willingness to comply with their wishes. It would seem that if leaders do not have the expertise to master a job, they can neither tell subordinates how to do that job nor effectively supervise them to be sure that the job is done correctly. Leaders must then rely on their relationship with subordinates (referent power) or be willing to provide something in exchange.

The sources of administrators' influence and the ways in which the sources affect subordinates have been investigated in several organizations. In the late 1960s, Bachman and his associates (Bachman, Smith & Slesinger, 1966; Bachman, Bowers & Marcus, 1968; Bachman, 1968) conducted comparative studies of the bases of supervisory power in business, industry, and education. They approached the problem by assessing the

relative importance of the bases of social power identified by French and Raven (1959). The Bachman studies sought to determine the relative importance of each of these bases of power in terms of subordinates' perceptions. The studies found that the two most important reasons subordinates comply with the wishes of their supervisors were the supervisor's reliance on legitimate, or on expert power. However, it was also found that use of legitimate power was generally negatively correlated with effectiveness measures such as employees' satisfaction with supervisor's performance and employee morale. Expert power was found to be positively correlated with the same measures. Similar results were found in college and university settings (Cope, 1972; Parsons and Platt, 1972).

In school settings the results similarly indicate the high ranking of expert power as a means of compliance and its consistent positive correlation with effectiveness measures (Hornstein et al., 1968; Balderson, 1975; Guditus and Zirkel, 1979-80; Richmond et al., 1980).

Deal and Celotti (1980) as well as Weick (1976) have suggested that schools may be loosely coupled. Consequently, principals may influence instruction in less formal, less tangible ways than has been traditionally thought. Deal and Celotti suggest that one way is for administrators to capitalize on their informal clout, influencing classroom activities by offering advice and support as a senior colleague of teachers. They suggest that another way for administrators to exert influence on classroom activities is through their role as symbolic leaders. By using myths, rituals and ceremonies, principals can define a school's special mission or purpose which is shared by all and which is clearly articulated to students, parents and teachers.

Schools are formal work organizations designed to achieve the instruction of students. Principals are charged with creating and/or maintaining the school's viability. In order to fulfill their leadership responsibilities, principals must request, suggest, or demand that teachers perform certain tasks or make certain changes in their work behavior. "The degree to which teachers accept the advice or acquiesce to the demands made by principals is problematic, perhaps more so than ever before" (Balderson, 1975). It seems useful to examine the way principals gain compliance from their staff in elementary schools and how those methods relate to school effectiveness, particularly with regard to student achievement.

The timeliness of such a study is corroborated by the fact that it occurs when there is a shift to conservative views in Canada. Tightening budgets, demands for accountability and demands for proof that we are getting our dollar's worth motivate the search for ways to create effective schools.

The research is reported in four chapters. The body of the report begins with an introductory section. The first chapter presents the review of the literature pertaining to the theoretical framework for this investigation and concludes with a statement of the problem, its significance, and definitions of the terms used in this study. The presentation of the research design of the study is given in Chapter Two. The presentation and analysis of data and the results from testing the hypotheses are described and discussed in Chapter Three. A summary of this research, its conclusions and implications are recorded in Chapter Four. A bibliography and appendices are also included.

CHAPTER I

Review of the Literature

Literature pertaining to the bases of a principal's power, school effectiveness and group atmosphere, are examined in this chapter in order to establish a theoretical framework for an investigation of the relationships among them. The independent variable, base of power, is examined first. The second section provides a discussion of organizational and school effectiveness and the factors that have been associated with it. The third section describes the relationships between the bases of power and the characteristics of effective schools. The fourth section examines the concept of group atmosphere. The fifth section includes a statement of the research problem and the study hypotheses. The final two sections describe the significance of the study and define the terms used.

Bases of Power

The terms influence, power and authority have frequently been used interchangeably in the literature. The most frequently used concept of power in recent years has been that developed by French and Raven (1959). Recent research, however, has indicated other potential sources of influence for leaders.

Dahl (1964) defined influence as "a relation among actors in which one actor induces other actors to act in some way they would not otherwise act" (p. 40). A similar definition was proposed by Tannenbaum (1962) for the concept of control. Weber (1947, p. 152) defined power as the probability that one actor within a social relationship will be

in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests". Similarly, Weber and others (Bierstedt, 1961; Lasswell and Kaplan, 1950; Tannenbaum, 1962; Goldhammer and Shils, 1968; Katz and Kahn, 1966) have defined authority as a special kind of power - namely that power which is viewed as legitimate. This suggests that a certain degree of voluntary compliance is associated with legitimate commands. Authority relations are distinguished from influence or power by three characteristics:

1) a willingness of subordinates to comply (Simon, 1957);
2) a suspension of the subordinate's criteria for making a decision prior to a directive (Simon, 1957); and
3) a power relationship legitimized by the norms of a group (Blau and Scott, 1962).

Peabody (1962) distinguished bases of formal authority (legitimation, position, and sanctions inherent in office) from sources of functional authority (professional competence, experience, and human relations skills).

Weber (1947) developed a typology of authority based on sources and kinds of legitimation employed. Three pure types of legitimate authority were distinguished: 1) legal authority; 2) traditional authority; and 3) charismatic authority. In the case of legal authority, Weber maintained that obedience was owed the person occupying the office due to the formal legality of commands that fell within the scope of authority of the office. A bureaucratic administrative staff was viewed as the purest type of exercise of legal authority and was both the most efficient and most rational means of control.

Simon (1957b), while accepting the authority of legitimacy, emphasized that authority requires acceptance by the subordinate of the decisions of the superior. He went on to suggest five factors which induce acceptance of authority:

1) The social sanctions are most important. Not only does society establish in the individual expectations of obedience in certain situations, but individuals who fail to accept their role will feel the social disapproval of their peers;
2) Psychological differences between individuals;
3) Purpose;
4) More formal sanctions in our society are based on the relation between the 'job' and economic security and status; and
5) Particularly in the case of individuals not much affected by influence in the third and fourth categories, simple unwillingness or disinclination to accept responsibility (pp. 132-133).

Simon (1957a), as well as Mechanic (1962), saw that the balance of sanctions is not completely one-sided, as "the employee has at his disposal a whole range of weapons of minimal performance, literal performance and nonperformance to help him resist attempted exercise of authority that appears to him illegitimate or unwelcome" (Simon, 1957a, p. 109).

Presthus (1962) extended the concept of legitimacy by proposing the concept of "generalized deference to authority". It assumes that "individual behavior in complex organizations may usefully be conceptualized as a series of reactions to authority" (p. 90). Individuals are seen as

being trained throughout their lives to defer to authority figures with the result that, over time, they develop a generalized deference to authority.

Functional authority, as conceived by Peabody (1962), involves personal attributes. Weber (1947) described bureaucratic administration as the exercise of control based on knowledge. This knowledge would include technical competence as well as knowledge based on experience. Weber describes in addition to rational legal authority, traditional and charismatic authority.

In traditional authority, the person or persons exercising authority are designated according to traditionally transmitted rules. The object of obedience is the personal authority of the individual which he enjoys by virtue of his traditional status. Obedience is not owed to inacted rules but to the person who occupies a position of authority by tradition or who has been chosen for such a position on a traditional basis. In place of a well-defined impersonal sphere of competence, there is a shifting series of tasks and powers commissioned and granted by chiefs through their arbitrary decision of the moment (Weber, 1947, pp. 341, 343).

The third authority type in the Weberian typology is charismatic authority. Charismatic authority is dependent on acceptance of a superiors' orders because of a quality of the leaders' personality which sets them apart from ordinary man and with which the subordinates identify. Legitimacy is established because it is the subordinate's duty to recognize the quality of the charismatic mission and to act accordingly. In its pure form, charismatic authority cannot remain

stable but becomes either traditionalized, or rationalized, or a combination of both.

Carlson (1962) found evidence of two Weberian ideal types of authority in a school system while studying superintendent's relations with others. Legal authority chiefly characterized the superintendent's relationship to the central administrative staff, while charismatic authority was emphasized in authority relationships with classroom teachers. Carlson suggested that when an organization desires change, there may be a need to maintain simultaneously two types of authority approaches. The factors that will determine authority structure include formal structure of the organization, the nature of the personnel, and their differential rule vulnerability.

A number of other writers have expressed views of functional authority similar to those of Weber. Barnard (1938) discussed "authority of leadership" which occurs where authority is imputed to men who command respect because of their ability, knowledge, and understanding. Presthus (1960) referred to "authority of competence" as well as to the authority created by a subordinate's affection for the leader.

Golembiewski (1964) suggested that vertical concepts of authority do not represent an adequate description of organizational authority. Four emphases in past studies were identified: 1) traditional, 2) functional, 3) behaviorial, and 4) integrative. The traditional concept refers essentially to what has been described as formal authority. In the functional concept, authority resides only in the particular job to be done, while the behavioral concept seeks its data

neither in legitimacy nor in function but in actual patterns of behavior. The integrative concept includes all three of the above. The integrative concept requires that the traditional, functional, and behavioural concepts of authority not just be present but also must be oriented such that they will reinforce each other. He proposed an organizational model built around small units where supervisors are in a position to make important decisions. He predicted that higher productivity and higher satisfaction would result when employees and supervisors both perceive they have increased influence over their work environment.

French and Raven (1959) proposed six bases of social power. Basing their ideas on studies involving small power and influence from the point of view of the recipient of the power or influence attempt, power was defined as potential influence which endures for some period of time between the influencer and the influencee. Influence was viewed as the active change in behavior, opinion, attitude, goal need, value or other aspect of a person's psychological field caused by an agent's action. This agent can either be another person, a role, a norm, a group, or a part of a group. The influence may result from an intentional act or may be a result of the mere presence of the agent. The influence may result in change in the direction intended by the agent (positive influence) or in the opposite direction (negative influence).

The bases of power were; the ability to reward and to coerce, legal position, capacity as a referent, expertise, and the usefulness of information provided. Although French and Raven (1959) did not emphasize the distinction between expert and information power, later

writings by Raven did (Collins and Raven, 1968; Raven and Kruglanski, 1970; Raven, 1974).

French and Raven (1959) suggest that people have reward power over others if they have the ability to deliver positive consequences or remove negative ones. Their power will be greater the more the group members value the reward, the more they believe they can dispense the reward, and the less their chances appear of getting the reward from someone else.

French and Raven (1959) also suggest that people have coercive power over others if they can mete out negative consequences or remove positive consequences. Coercive power frequently causes the group to avoid the power-holder. Group members may comply but they intend to avoid further interaction. Only when the use of coercive power brings the conflict out in the open to be resolved can it have many positive effects.

French and Raven (1959) believe that legitimate power occurs when group members believe that a leader ought to have influence over them because of the leader's position in the group or organization (employer) or because of the leader's role responsibilities (policewoman). People believe it is their duty to follow the commands of a person with legitimate power.

When a leader has referent power, French and Raven (1959) suggest that group members identify with or want to be like the leader. The group does what the leader wants out of respect, liking, and wanting to be liked. Generally, the more the leader is liked, the more the group members will identify with that leader.

When leaders have expert power, people attribute to them the reputation for having some special knowledge or ability and as being trustworthy in French and Raven's (1959) view. They believe the leader is not trying to deceive them for selfish purposes. Power resides in the person's reputation.

When leaders have informational power, people believe they have resources of information that will actually be useful in accomplishing the goal and that are not available elsewhere (Raven, 1974). The power is based on the logic of a person's arguments or the demonstrated usefulness of the information they provide. Power resides in the usefulness of the information not in the person.

Studies using the bases of power described by French and Raven (1959) indicate that only use of expert and referent power is related to increased productivity and employee satisfaction. Use of legitimate, reward and coercive power is consistently related to decreased productivity and employee satisfaction. The general pattern of the studies was to have employees rank the importance of each power base as a means for obtaining their compliance with the wishes of their superior. A description of each base of power was given and the subject was asked to place a number from one to five beside each power base indicating its relative importance, with one being most important. In many of the studies, each power base was correlated with a measure of performance. In some cases, this was the employee's satisfaction with the performance of their superior. In other cases, it was one or more measures of performance, other than satisfaction.

As indicated in Table 1, legitimate and expert power were consistently ranked as the most important means for superiors to gain compliance from subordinates. Referent power generally ranked third with reward and coercive power following in that order.

More importantly, only expert and referent power were consistently related to high satisfaction and high performance. Use of legitimate reward and coercive power was consistently related to poor satisfaction and performance. This grouping of power bases resembles Peabody's (1962) distinction of functional (professional) competence, experience, human relations skills, and formal (legitimation, position, sanction) bases of authority.

Of particular interest to the present study, is Balderson's (1975) study of 426 elementary school teachers in an urban school district of Western Canada. Teachers were asked to select the statement (corresponding to one of five power bases) which best described why they did the things the principal of the school suggested or wanted them to do in their work. Schools were then classified according to the response chosen by the largest proportion of teachers. Although schools were not selected on the basis of the principal having been there for at least two years (in order to have had a significant impact), the results were similar to the rest of the studies shown in Table 1. The largest group of teachers (45%) perceived that their compliance was based on the principal's expertise. Legitimate power ranked second (21%). Personal (referent) power third (15%), followed by Coercive (8%) and Reward (5%). Seven percent of the teachers gave no response.

TABLE I

Measures of Performance, Employee Satisfaction and Relative Importance in Relation to Five Bases of Power

Power Base	Study[a]	1	2	3	4	5	6	7	8	9	10	11
Expert	R[b]	2	2	1,2	1		2	1	1,3,4	1	2	1,3
	P	+	+	+		+				+		
	S	+		+	+	+	+	+	+	+	+	+
Legitimate	R	1	1	1,2	2		1	2	1,2,5	2	1	1,2
	P	−										
	S	−		−,+	−	−	+	−	+	−	−	−
Referent	R	3	4	2,3,4,5	3		3	4	1,2,4	3	3	3,2
	P		+	+								
	S	+		+	+	+	+	+	+	+	+	+
Reward	R	4	3	4,3	4		4	5	4	5	4	4,5
	P	−	+,−	+,−								
	S	−		+,−	−	−	+	−	−		−	+
Coercive	R	5	5	5,4	5		5	3	2,5	4	5	4,5
	P	−				−				−		
	S	−	−	−	−	−		−	−	−	−	−

[a] 1 = Bachman, Smith and Slesinger (1966); 2 = Student (1968); 3 = Bachman, Bowers and Marcus (1968); 4 = Bachman (1968); 5 = Hornstein et al. (1968); 6 = Ivancevich (1970); 7 = Burke and Wilcox (1971); 8 = Cope (1972); 9 = Balderson (1975); 10 = Guditus and Zirkel (1980); 11 = Richmond et al. (1980).

[b] R = rank, P = relationship of power base to performance, S = employee satisfaction + = positive relationship, − = negative relationship

Teachers also responded to items which referred to their feelings, the principal, and matters of school organization and operation. Systematic differences in staff responses were found to be related to certain bases of principal power. Schools with principals whose power was based on expertise received high scores for teacher morale and teacher satisfaction with principal's performance. These schools also rated highly the degree to which the principal favored: (a) teachers who did an effective job helping students learn; (b) teachers who experimented with new ideas and techniques; and (c) teachers who suggested ideas to improve the school. In addition, these schools also received high scores for the degree to which teachers rated their principals as open to their ideas and the degree to which they feel their principals have delegated enough authority to teachers to enable them to do their work.

Schools with principals perceived as experts received low scores for the degree to which the principals favored keeping the "boat steady" regarding educational matters, and the preference for teachers to transfer out.

Balderson referred to referent power as "personal" power. Personal power was positively associated with teacher morale, satisfaction with the principal's performance, principal exerting unreasonable pressure for change in teacher performance, principal favoring getting along well with parents and quiet, and controlled classrooms. Legitimate power, however, was associated with teachers preferring to transfer out, doing things against their own judgement and feeling powerless.

Coercive power in schools was associated with teachers preferring to transfer out, doing things against their own judgement, and

possessing a sense of powerlessness. Coercive power was also associated with principals keeping the "boat steady", trying to influence the way teachers teach, and exerting unreasonable pressure on teachers, favoring quiet controlled classrooms and favoring following guidelines, schedules and curricula.

The implications of these findings are that principals who rely on expertise as the basis for influencing teachers are associated with schools with high staff morale, a commitment to improvement and participatory decision making.

Although the study relies on teachers' perceptions and cannot claim a cause and effect relationship between power base and the outcome measures, it is consistent with the other studies using French and Raven's five power bases.

In summary, the literature varies widely in how it defines influence, power and authority. The most widely used paradigm was developed by French and Raven who define influence as the actual change in behavior, opinion, attitude, goal, need, value or other aspect of a person's psychological field caused by the action of some influencing agent. Power is defined as the potential influence of an agent. Authority is viewed as power that is seen as legitimate.

Five of French and Raven's bases of power have been widely used in research. Results in a variety of organizations indicate that expert and referent bases are associated with measures of subordinate satisfaction and organizational performance. Legitimate, coercive and reward power are associated with low levels of subordinate satisfaction and organizational performance. A study in Canadian elementary schools

(Balderson, 1975) indicated that the principal's use of expert power in particular, and referent (personal) power to a lesser extent was associated with higher teacher morale, satisfaction with the principal's performance, degree principal favoured teachers doing an effective job in helping students learn, teachers trying and suggesting new ideas, and principals being open to teacher ideas and teacher involvement in decision making.

The literature (Dwyer, 1984; Leithwood and Montgomery, 1982; Manasse, 1984; Peters and Waterman, 1982; Sergiovanni, 1984) has recently emphasized the importance of a clear vision of where an organization is going. Writers attach the function of creating and communicating this vision to the leaders of the organization. Most distinguish an effective organization from an ineffective one largely based on how well the leader is able to create and communicate a well-defined purpose or vision. Since the ability to clearly define and articulate such a vision would seem to relate to a subordinate's willingness to comply with that vision, it is proposed that an additional base of power called visionary power be added to French and Raven's (1959) power bases.

Peters and Waterman (1982) in their best selling book In Search of Excellence suggest that the one all-purpose bit of advice they derived from the study of excellent companies was to discern your value system, what your company stands for, then faithfully adhere to those beliefs. They state:

> The basic philosophy, spirit, and drive of an organization have far more to do with its relative achievements than do techno-

logical or economic resources, organizational structure, innovation, and timing. All these things weigh heavily in success. But they are, we think, transcended by how strongly the people in the organization believe in its basic percepts and how faithfully they carry them out (p. 280).

Sergiovanni (1984) has recently contributed his ideas about high performing schools and their relationship to the behaviours of their leaders. He distinguishes three degrees of effectiveness: 1) incompetent schools, 2) competent schools and 3) excellent schools. Incompetent schools are described as confused, inefficient and having a human climate full of malaise. Student achievement is lower in these schools. Teachers may not be giving a fair day's work; student absenteeism, discipline and violence may be problems; conflict may characterize staff interpersonal relationships; and parents may feel isolated from the school.

Competent schools get the job done in a satisfactory manner. They exhibit mastery of certain predetermined essential fundamentals that are lacking in the incompetent schools.

Excellent schools exceed the expectations of being just satisfactory. Students in excellent schools accomplish far more and teachers work much harder than can ordinarily be expected. There is a sense of purpose which rallies people to a common cause, work has meaning and life is significant; teachers and students work together with spirit; accomplishments are recognized.

Competent schools in Sergiovanni's view, require the presence of the basic forces of technical and human leadership in addition to

educational leadership. The absence of any one of these forces result in a less than fully competent level of education and schooling. The presence of these three forces, however, are not sufficient to create excellence, although educational leadership can be considered to be more important than the human or technical forces.

It is the additional presence of both symbolic and cultural forces which distinguish excellent schools from merely competent schools.

Sergiovanni (1984) suggests that the symbolic leader, by modeling important goals and behaviours, signals to others what is of importance and value. By touring the school; visiting classrooms; seeking out and visibly spending time with students; downplaying management concerns in favor of educational ones; presiding over ceremonies, rituals, and other important occasions; and providing a unified vision of the school through proper use of words and actions, the leader assumes the role of "chief". He considers that this purpose is less conveyed by a leadership style than by what leaders stand for and communicate to others, particularly through their actions. Leaders provide a vision and a sense of purpose about the seemingly ordinary and mundane and they help others to see the significance of their own actions.

A similar set of roles which characterize an effective educational leader was proposed by Downey (1961). He called them technical-managerial skills (efficient business manager), human-managerial skills (influential leader of people), technical-educational skills (knowledgeable curriculum developer), and speculative-creative skills (sensitive agent of organizational change and development). In referring to the speculative-creative role, Downey states:

> Such principals are concerned that fresh, new ideas find their way into their school; and they see to it that all new ideas get fair consideration. Educational innovations become topics of conversation in their school. They, themselves, assume the role of "idea man" and through stimulating their staff with ideas, they produce a climate in which speculation and creativity flourish. Their school is an exciting place in which to be (p.13).

Bennis (1984) describes a compelling vision as the key ingredient in excellent organizations. By vision, he refers to the capacity to create and communicate a view of a desired state of affairs that induces commitment among those working in the organization."

The idea that effectiveness is related to a sense of vision, purpose, or clearly articulated goals is pervasive in the school effectiveness literature (Blumberg and Greenfield, 1980; Cawelti, 1984; Duckworth and Carnine, 1983; Dwyer, 1984; Edwards, 1979; Kelsey, 1983; Leithwood, 1983; Leithwood and Montgomery, 1982; Lipham, 1960; MacKenzie, 1983; Manasse, 1984).

Manasse (1984), in describing high performing organizations, states that they have well-defined basic purposes on which the organization focuses its energy and resources, along with leadership which is strong and focussed and directed toward creating commitment to purpose. Excellent organizations require a sense of purpose and direction provided by well developed and clearly articulated goals. Effective principals, she suggests, have a vision of their schools and of their role in making that vision a reality.

Research on organizational change indicates that effective principals may, in fact, need two types of vision: a vision of their schools and their own role in those schools; and a vision of the change process itself

-- a framework within which to act on a daily basis and against which to assess effects.

Vaill (1982) incorporates this "vision" in his concept of "purposing". He defines purposing as "that continuous stream of actions by an organization's formal leadership that has the effect of inducing clarity, consensus and commitment regarding the organization's basic purposes". Vaill finds that leaders of high-performing systems have strong feelings about the attainment of the system's purposes, focus on key issues and variables, and put in extraordinary amounts of time to achieve their purposes.

David Berlew (1979), in describing a three-stage model relating types of leadership to the emotional tone in organizations, suggests that a charismatic leadership mode is needed to provide meaning to work and generate organizational excitement. Berlew defines charisma as:

1) The development of a "common vision" for the organization related to values shared by the organization's members;
2) The discovery or creation of value-related opportunities and activities within the framework of the mission and goals of the organization; and
3) The making organization members feel stronger and more in control of their own destinies, both individually and collectively.

He cautions that there is a danger of overbalancing an organization with too much charismatic leadership. There must also be effective custodial leadership (looking after basic needs) and managerial leadership (looking after achievement and recognition needs).

All of the above ideas seem to be referring to what Vaill has called "purposing". It is based on a platform of values that are clear, at least, to the leader and which the leader attempts to develop a consensus and commitment to on the part of the other members of the organization. This platform is revealed less by what leaders say than what they do. Although it would deal with all aspects of school life, the effectiveness literature would indicate that prime concern would be given to educational concerns.

Thus, it is proposed that another base of power called "Visionary Power" be added to the French and Raven model. Visionary power would be based on influence stemming from the subordinates' perceptions that the supervisor has a definite vision of the purposes (or goals) of the organization and that he clearly articulates those purposes or goals.

Organizational Effectiveness

No single model or definition of organizational effectiveness exists. Although many writers (Steers, 1977; Ratsoy, 1983) describe a multidimensional approach, the effective schools movement has concentrated on factors which are associated with one major outcome, student achievement (Klitgaard and Hall, 1975; California State Department of Education, 1977; Wellisch, MacQueen, Carriere and Duck, 1978; Edmonds, 1982; Leithwood and Montgomery, 1982; Murphy, Weil, Hallinger and Mitman, 1982; Eubanks and Levine, 1983; Rowan, Bossert and Dwyer, 1983; Schweitzer, 1984).

No universally accepted definition of organizational effectiveness seems to exist. A number of labels have been used to describe this

concept. Heaton (1977) uses productivity to describe effectiveness. In his view productivity of (human) service organizations is a result of four functions: input, processing, output or follow-up, and timing and coordination (pp. 45-46).

Becker and Newhauser (1975) select efficiency as the label. They focus mainly on the output to input ratio of organizations.

Cummings and Schwab (1973) choose performance of employees as the criterion of effective organizations. The ability and motivation of employees are affected by "environmental" variables such as job design, supervision, fellow workers, compensation, working conditions, training, and evaluation.

Spray (1976) in attempting to review a number of conference papers on organizational effectiveness suggests that a theoretical unity based on a systems model of organizational functioning seems to be developing.

In earlier writings, Argyris defined it as "the degree to which an organization accomplishes its objectives" (1965:311). In order for longer term survival, however, the organization had to maintain its internal system in working order so that it can solve problems effectively and also maintain its ability to adapt to its external environment. Other early definitions were general variations on the above theme.

Duncan (1973) referred to goal achievement, integration and adaptation. Etzioni (1964) described goal realization and efficiency. Georgopoulos and Tannenbaum defined organizational effectiveness as "the extent to which an organization as a social system, given certain resources and means, fulfills its objectives without incapacitating its

means and resources and without placing undue strain upon its members" (1975: 535-536). Ghorpade (1970) argued for considering the rational goal-attaining basis of organizational and the means used as well as the needs experienced by the organization's social systems. Mott (1972) described effectiveness as the ability of an organization to mobilize its centres for the actions of production and adaptation. Hoy and Miskel (1982) describe an integrated goal - system resource model of organizational effectiveness.

Since no universally accepted definition of organizational effectiveness exists, it is not surprising that attempts to measure it are equally disparate.

Mott (1972) developed four indicators of organizational effectiveness. These are (1) a productivity index comprised of quantity, quality and efficiency measures; (2) an adaptability index consisting of measures concerned with anticipating problems, keeping up to date, promptness and prevalence of adjustment; (3) a flexibility index which measures the organization's ability to cope with overloads of work; and (4) an overall effectiveness index composed of a combination of the other three. These measures are measures of perceived effectiveness and he claims that there are a number of ways of organizing and leading which will result in an effective organization.

Steers (1977) has identified 14 evaluate criteria for effectiveness. Campbell (1977) after an extensive review of the literature presents 30 indices of organizational effectiveness. He further suggests that the correct criteria to be used in any organization will be determined by value judgements and political considerations (p. 46).

Since so many criteria have been identified which measure organizational effectiveness, most writers seem to recommend a multiple criteria approach.

Some models of organizational effectiveness are merely taxonomies of the variables. Others claim to indicate cause and effect.

Campbell (1977), using the writings of Ghorpade (1971), proposed a goal-centered view and a natural system view of organizational effectiveness. The goals approach judged schools effective to the degree that their goals were being achieved. The natural systems view or system resource view (Yuchtman and Seashore, 1967) would determine effectiveness by measuring the school or school system's ability to procure funds, etc. while avoiding undue strain. The primary focus here is on input.

Steers (1977) attempted to pull together the varied organizational effectiveness literature into one process model. Steers (1977:5) defines effectiveness as the "organization's capacity to acquire and utilize its scarce and valued resources as expeditiously as possible in the pursuit of its operative and operational goals."

Steers, along with many other recent researchers and writers, recognizes that organizational effectiveness is a multi-dimensional concept. He combines the following three concepts: (1) goal optimization of an organization's multiple and sometimes conflicting goals, (2) a systems perspective which relates factors within the organization and in its environment, and (3) an emphasis on how human behaviour in the organization affects its performance. His model

presents a description of the various organizational effectiveness variables but does not relate them in a cause and effect fashion.

Siepert and Likert (1973) describe the relationship between causal, intervening and end result variables. Dressler (1980) describes context variables which affect decision making and communication which in turn affect the structure and design of the organization as well as the motivation and compliance of its members. These last two, which when combined, yield a measure of organizational effectiveness are also dependent on leadership, group and conflict processes, and change and development activities.

Zammuto (1982) proposed an evolutionary model where the element of time is considered in measuring organizational effectiveness. Thus effectiveness is defined as the organization's ability to satisfy the changing preferences of its many constituencies over a period of time.

Most recently, Ratsoy (1983) has attempted to draw together all the organizational effectiveness variables into a "frying pan model". He proposes five major categories of indicators: (1) goals, both stated and real; (2) other outcome measures, including satisfaction, absenteeism, and adaptability; (3) personnel characteristics including level of professionalism, degree of attachment, personal motives, knowledge possessed, leadership behaviour, decision making style, and communication skills; (4) organizational variables, including the nature of the work technology used, the design of the organizational structure, the nature of the organizational climate, etc.; and (5) environmental variables, such as the boundary spanning activity, the linkages with other organizations, the degree of stability or turbulence in the

environment, the number and nature of financial, personnel, capital, and ideas input or output. Although the model does not attempt to specify a specific approach to assessment, it does emphasize the interaction that occurs between the technological, structural and climate variables of organizations.

The study of effective schools has basically concentrated on pupil academic performance as the major outcome criterion.

The California School Effectiveness Study (1977) attempted to determine what distinguished high-achieving schools from low-achieving schools in comparable socio-economic areas. It was found that generally in high-achieving schools, teachers rated principals as giving greater support in instructionaly related areas.

Specifically, the principals were more helpful at supporting new ideas and projects, backing up teachers, enhancing parent-teacher relations, enforcing discipline, developing instructional leadership and acquiring and distributing materials. The supportive behaviour of the principal was considered to be the major factor contributing to teacher job satisfaction and high student achievement in this study.

In 1978, Wellisch, MacQueen, Carriere and Duck attempted to determine what characterizes the management and organization in schools that are successful in raising student achievement. The study focussed on three aspects: administrative leadership in instruction, coordination of instruction programs, and academic standards as evidenced through school policy regarding student promotion.

Successful schools had principals who demonstrated a concern for instruction. These principals were perceived to feel stronger about

instruction, have more definite ideas and promote a definite point of view more often than principals in less successful schools.

The researchers found that in schools where the teaching performance was regularly reviewed by the principal and discussed with the teachers, it was significantly more likely that these schools would show student achievement gains.

The successful schools had principals who assumed significantly more responsibility for: making decisions regarding instruction, selecting basic instructional materials, planning programs for the entire school, and evaluating school programs.

Schools were found to be significantly more likely to show gains in student achievement if the school's instructional program was coordinated with respect to content, sequence of objectives, and use of materials.

In successful schools, students were significantly more likely to repeat a grade in order to meet academic standards. In such schools, principals were significantly more likely to review and discuss teaching performance regularly with staff.

Gersten and Carnine (1981) list a number of necessary functions for effective schools. The tasks of implementing effective programs, active involvement in curriculum improvement, monitoring of student and teacher performance, provision of concrete technical assistance to teachers, demonstrating visible commitment to programs for instructional improvement and provision of emotional support as well as incentives for teachers must be performed by someone. Gersten and Carnine suggest that

these functions do not have to be done by the principal but he must see to it that they are done.

In an excellent review of the literature on the role of the elementary school principal in program development, Leithwood and Montgomery (1982) distinguished the behaviors of effective principals from those of ineffective principals. Among their findings was the fact that effective principals view themselves as instructional leaders whose function is to ensure that students in their schools are provided with the best possible programs. They also found that effective principals were prepared to focus their own energies as well as those of their staff on solving relevant problems -- a task structuring behaviour. An effective principal's primary orientation is task rather than human relations. In Leithwood and Montgomery's search of factors they found that effective principals were directly involved with teacher selection. They also established clear priorities and emphases among teacher objectives for students. They go on to state that "effective principals are reported to be actively concerned about influencing several aspects of instructional strategies" (p. 323). They "used program priorities as a criterion in making time allocation decisions" (p. 324). They attempt "to influence the coordination among teachers of choices of goals and methods so there would be accumulation of effects on students through the grades" (p. 324). They "use program priorities as a criterion for allocating out-of-classroom materials and physical resources" (p. 325). Their use of district resource staff depends "largely on the perceived value of district staff in helping to achieve priority school goals" (p. 325).

Leithwood and Montgomery also reported structuring strategies of

effective principals. Such principals select influential staff members to participate in innovative school projects and thus ensure strong leadership. They help staff directly in areas where they have expertise and they also establish structures within which decision-making can be shared. Such principals frequently involved themselves directly in program improvement activities during the start-up and implementation stages. Effective principals were found to provide a clear focus for curriculum goal setting by giving high priority to teachers' curriculum planning and encouraging teachers to spend large proportions of time in instruction. They also made themselves available as sounding boards for teachers' problems or new ideas. These principals worked closely with teachers in the classroom on issues identified during classroom observation; a form of individual in-service training that may be more or less formal but is restricted to areas of classroom behaviour in which the principal has special expertise. They also arranged for less individualized but carefully structured professional development in their schools." Effective principals also monitor student progress very closely by reviewing test results. They also facilitate communication between school and community in order to gain community support for school goals and priorities.

In 1982, the Colorado State Department of Education developed a series of indicators of quality schools. Three indicators of effective principal leadership in such schools were: 1) the principal's support and encouragement for cooperative teaching, new ideas, and creative teaching; 2) the principal's accessibility and responsiveness to teachers; and 3) the principal's willingness for open communication.

Hall, Rutherford, Hord and Huling (1984) identified three change facilitator styles in principals they studied. The first, initiator style principals, was correlated (.74) with implementation success at the classroom level. These principals were described as listening to teachers but having high expectations which causes them to keep pushing the innovation. The result is a slightly poorer climate but successful innovation. Initiator style principals were also described as having clear, decisive, long range policies and goals that transcend but include implementation of current innovations. They tend to have very strong beliefs about what good schools and teaching should be like, and they work intensively to attain this vision. Initiators make decisions in relation to their goals for the school and in terms of what they believe to be best for students, which is based on current knowledge of classroom practice. Initiators have strong expectations for students, teachers, and themselves and they convey and monitor these expectations through frequent contacts with teachers as well as clear explanations of how the school is to operate and how teachers are to teach. When they feel it is in the best interest of their school, they will seek changes in district policies or programs as well as feel free to reinterpret them to suit the needs of the school. Initiators solicit input from the staff and then make decisions in terms of school goals.

The second grouping, manager style principals, do not move beyond the basics of what is imposed on them while the third style, responder style principals, let the teachers take the lead and focus only on traditional administrative tasks.

Murphy, Hallinger, Weil and Mitman (1984) have described the characteristics of effective instructional leaders. From their research, they have found that such leaders promote and support instructional improvement. They plan staff inservice, work in the classroom with teachers who are learning new skills, select staff development programs, distribute research reports and notices of inservice, arrange for teacher to observe their colleagues teach, give private and public recognition of exemplary teaching efforts, allocate resources to instructional improvement efforts and buffer the school's curriculum and instruction from disruptions.

Recently (1985), Peter Coleman reported on a two-year project to improve social climate in nine diverse elementary schools in British Columbia. He found school level planning led by the principal to be a critical climate component. He also found that norms of collegiality and continuous improvement were essential for school self-renewal. The well planned use of staff meetings and professional development time was considered essential to generate both motivation and methodology for addressing school improvement. The principal was seen by the respondents to this study as the key person in bringing about school improvement.

In summary, the literature generally accepts five characteristics as distinctive of effective schools:

a) strong administrative leadership of instruction;

b) emphasis on basic skills achievement;

c) positive, orderly environment (climate);

d) high expectations for students and staff; and

e) careful monitoring of student progress and staff.

The literature generally considers effective schools to be those which raise student achievement. With this in mind, Schweitzer, developed a questionnaire which included five characteristics frequently associated with effective schools. He found that in using the questionnaire, that schools which scored highly on the five characteristics also scored highly on the California Achievement Test (r's from .58 to .79). This study will define effective schools as those whose teachers perceive them as scoring highly on each of the five characteristics of effective schools generally described in the literature.

Group Atmosphere

The literature appears to indicate that the quality of the relationships of members of an organization (group atmosphere) has an effect on the effectiveness of that organization. Studies using Fiedler's theory of leader effectiveness support the need to include group atmosphere as a mediating variable.

Group atmosphere, as described by Fiedler, appears to be an indicator of school climate. The use of the GA Scale to obtain the members' perceptions of group atmosphere provides an easily administered and reliable means to obtain a climate rating. The members are asked to describe their group using eight pairs of adjectives. Thus group atmosphere will be defined as an indicator of the social climate in each

school as perceived by the teachers. More specifically, it is the teachers' perception of the degree to which the group atmosphere of their present school is friendly or unfriendly, accepting or rejecting, satisfying or frustrating, enthusiastic or unenthusiastic, productive or nonproductive, warm or cold, cooperative or uncooperative, interesting or boring, supportive or hostile, and successful or unsuccessful.

McKague (1968) found in a study of 39 large high schools that only in schools where the group atmosphere was more positive, did a low least preferred coworker (LPC) score on behalf of the principal correlate with high Espirit and low Disengagement (Organizational Climate Description Questionnaire). Highly positive group atmosphere (GA) and low LPC scores by the principal were also associated with perceptions that the principal and the teacher are doing an effective job and that teachers are satisfied with their teaching situation.

McNamara (1966) in a study of elementary schools reached similar conclusions. He found, that provided the group atmosphere was more positive, those principals who were described by their staff as attaching greater importance to instructional matters at staff meetings, who prescribed teaching methods to a greater extent, more frequently interrupted lessons by using the public address system, made longer classroom visits (but played a less active part in classroom activities during the visit), and were more likely to request teachers to visit the office to discuss teaching methods are likely to be more effective. He also found that staffs with more positive GA rated themselves high on satisfaction when they rated the principal effective.

Such high satisfaction was not present with low principal effectiveness, nor with less positive group atmosphere.

Isherwood (1973) summed the principal's scores for the charismatic, expertise, normative and human relations skills bases of authority to give an estimate of the principal's informal authority. Similarly, traditional and legal authority were grouped as formal authority. He found that the principal's informal authority positively correlated with three aspects of social climate: teacher loyalty, job satisfaction and a sense of power in the school.

Hoy, Tarter and Forsyth (1978) report on the results of a study using the Leadership Behaviour Description Questionnaire (LBDQ). They found that the Consideration dimension, not the Initiating Structure dimension was the most salient element in elementary schools for developing teacher loyalty.

Blanchard (1978) found that regardless of leadership style, the higher situational control leaders had, the more effective they were. Her study of 103 elementary school principals, their immediate supervisors and their school staff in Wisconsin used Fiedler's contingency model of leadership. The study used three different measures of effectiveness and found that principal effectiveness is not a function of LPC score but the degree of situational control. Situational control was a combination of group atmosphere, knowledge and experience concerning the job, and position power. Fiedler has stated that group atmosphere is the most important of the three factors in determining situational control. Thus, it would seem from the results

of this study, that group atmosphere bears a strong relationship to principal effectiveness.

The work of Rensis Likert appears to add further support for these ideas. His theory suggests that if a principal has high technical competence, a well developed plan of operation and high performance goals and uses a participative (System 3 or 4) style of leadership, then the results will be increased loyalty, increased performance goals, more cooperation, more assistance from peers, fewer perceptions of unreasonable pressure, more favourable attitude toward the manager and high motivation to produce. Many of these results (intervening variables) seems to be related to group atmosphere. Likert goes on to suggest that given the conditions above, the result will be lower production costs, higher quality and quantity of production and higher morale.

Studies in non-educational settings (Fleishman and Harris, 1962; Cummins, 1971; Greene, 1975) indicate that the effect of initiating structure by leaders on quality of performance is moderated by considerate leader behaviour.

The literature appears to support the idea that the quality of social climate in the organization has an effect on the effectiveness of the organization.

Relationships Between Power Bases, Group Atmosphere and the Characteristics of Effective Schools

The literature indicates that one would expect to find a strong positive relationship between functional bases of power like information

power, expert power, visionary power, and referent power; and the characteristics of effective schools. The literature also indicates one would expect to find a strong negative relationship between the formal bases of power (legitimate, reward, coercive) and the characteristics of effective schools.

The above relationships seem to occur when group atmosphere in the school is more positive. This would be supported by McKague's (1968) interpretation of the results of his study using Fiedler's theory. He found that where group atmosphere in high schools was more positive (ie GA $\geq$65), teachers' perceptions that the principal and the school are doing an effective job and that teachers are satisfied with their teaching situation were associated with behaviors of the principal that were task oriented in nature (low LPC). Specifically, these principals were both dynamic and involving. In their interaction with staff members they not only contribute a great deal to the discussion, but also encourage active participation from teachers. They tend to be controlling and managing in their behavior of others and expect a high level of performance from them.

McNamara (1966) also examined attributes of principals who scored low on the LPC scale. He found these principals were described by their staff as more instruction-oriented, more prescriptive and vocal in supervision, supervised teachers' activities more closely, and made more vigorous efforts to involve teachers in discussing and deciding on school problems.

The attributes described above appear to relate more to confident principals who have expertise in the instructional area and feel they

know what is best for their school. This feeling of competence on the part of principals would seem to lead them to be highly involved in goal setting, coordination of program and monitoring of outcomes. Such behaviors relate most strongly to the expert, informational and visionary bases of power and are associated with leaders of effective schools.

In situations where group atmosphere is less positive, many of the behaviors associated with the school effectiveness measure would likely be viewed as stemming from a legitimate or coercive power base. Hawley's (1969) study of elementary schools indicated that where there is less positive GA, principals who are considered to be directive and controlling are seen to engage in behavior which responds more to the needs of the system than the idiosyncrasies of the staff. Such a perception would likely lead staff to view such behavior as coercive or, at least, based on legitimacy rather than an expert, informational or visionary base. Although the actual behaviors of the principal might not be significantly different, the less positive group atmosphere would in some way be associated with negative attributions of power, leading staff to perceive the principal as operating from a coercive or legitimate power base. The coercive and legitimate bases have been consistently associated with negative performance. The same would be expected to occur in this study.

No study has examined the links between French and Raven's bases of power and a measure of school achievement. Balderson's (1975) study does, however, indicate that the expert and referent power bases are associated with outcomes similar to those mentioned in the effective schools literature.

There has been to date, no attempt to see if visionary power is related to exceptional school achievement. Hall, Rutherford, Hord and Huling (1984) do describe schools with initiator style principals as accomplishing more quality and quantity of implementation of alternative programs. Initiator style principals were described as having clear, decisive goals and beliefs about what schools and teaching should be like and work intensely to attain them. It seems clear that initiators emphasize their visionary power.

A recent study of school climate by Coleman (1985) indicates the importance of the goal clarification role of the principal in the improvement of elementary school climate.

These studies and others indicate the potential importance of visionary power to enhanced school effectiveness.

The literature on school effectiveness gives some indication of the behaviours of principals in effective schools. For example, Leithwood and Montgomery (1982) found that effective principals viewed themselves as instructional leaders, structured tasks for the teachers, were involved in grouping students and selecting the teachers for those students, established clear priorities for teachers' objectives for students, and they also priorized and strove to achieve school goals. These behaviours seem related to a principal's possession and promotion of definite ideas about what is important in his school, his degree of useful knowledge and information about matters affecting good schools and good learning situations as well as a positive school climate. Although the literature does not suggest one definite core set of

behaviours, it does seem to suggest that the above behaviours would be related. This study will attempt to investigate that relationship.

Statement of the Problem

From a pragmatic perspective it can be said that the basis of social interaction is social power. The literature indicates that this social power can take many forms or bases. A school principal, in leading a school should operate more from certain bases of power, eg. visionary, information, referent, expert than from others eg. legitimate, reward, coercive. The problems that this study attempts to answer are:

1) How is the perceived use by the principal of these bases of power related to factors associated with effective schools?

2) Does this relationship change if the perception of group atmosphere changes?

Contributors to school effectiveness are many. In this exploratory study there are few concrete indications of what the variables or mediators in the relationship between bases of a principal's power and school effectiveness might be. Those variables used in this study have been derived from the available literature. The relationships established here will allow other researchers to be mosre precise in the factors they relate in future studies. Five research hypotheses will be used to investigate these problems.

H.1 There will be a significant positive relationship between each of the school effectiveness characteristics as measured by the School Effectiveness Questionnaire (SQ) and the visionary,

referent, information, and expert bases of power as measured by the Bases of Power Questionnaire (BPQ).

H.2 There will be a significant positive relationship between group atmosphere as measured by the Group Atmosphere (GA) scale and the visionary, referent, information, and expert bases of power as measured by the BPQ.

H.3 There will be a significant negative relationship between each of the school effectiveness characteristics as measured by the SQ and the legitimate, reward and coercive bases of power as measured by the BPQ.

H.4 There will be a significant negative relationship between GA and the legitimate, reward and coercive bases of power as measured by the BPQ.

H.5 There will be a significant positive relationship between GA and each of the school effectiveness characteristics as measured by the SQ.

The hypotheses were tested using an .05 probability of committing a type I error due to the exploratory nature of the research.

Significance of the Study

This study will provide a greater understanding of how different bases of power used by the principal are related to school effectiveness characteristics. It is also expected that the study will provide a greater understanding of how group atmosphere affects the relationship between the bases of power used by the principal and correlates of school effectiveness.

Since the only reported use of the SQ has been in American schools, it is hoped that this study may give an indication of its usefulness in Canadian schools. Very little has been done in the Canadian setting to measure characteristics of effective schools.

It is hoped that this study will indicate the usefulness of information and visionary power.

Definition of Terms

The following terms are used throughout this dissertation in reference to the accompanying definitions.

School effectiveness. A composite measure used to describe schools which are characterized by strong administrative leadership of instruction by the principal, a strong emphasis on achievement of both students and staff, high expectations for both students and staff, the use of assessment instruments and a positive, orderly environment as perceived by teachers.

Group atmosphere. An indicator of the social climate among the staff of a school, including the principal. Specifically it is the teachers' perception of the degree to which the social climate of their present school is friendly or unfriendly, accepting or rejecting, satisfying or frustrating, enthusiastic or unenthusiastic, productive or nonproductive, warm or cold, cooperative or uncooperative, interesting or boring, supportive or hostile, and successful or unsuccessful.

Influence. A change in a person's cognitions, attitude, or behavior which has its origin in another person or group (the influencing agent) (Raven 1971).

Power. The potential influence which the agent could exert on a person. (Raven 1971).

Authority. Will be considered to be defined the same as power, creating interchangeable terms. In order to reduce confusion, the term authority will not be used.

Reward power. The ability of principals to gain a teacher's compliance based on the teacher's belief that principals can give special help and benefits to those who cooperate with them.

Coercive power. The ability of principals to gain a teacher's compliance based on the teacher's belief that principals can penalize or make things difficult for those who do not cooperate with them.

Expert power. The ability of the principal to gain a teacher's compliance based on the principal's reputation for superior knowledge or ability.

Information power. The ability of the principal to gain a teacher's compliance based on the principal's ability to actually provide useful information.

Referent power. The ability of principals to gain a teacher's compliance based on the teacher's admiration of their personal qualities and the teacher's desire to act in a way that merits their respect and admiration.

Legitimate power. The ability of principals to gain a teacher's compliance based on the teacher's belief that principals have a right, considering their position, to expect teachers to do what they want.

Visionary power. The ability of the principal to gain a teacher's compliance based on the teacher's belief that the principal has a definite vision of the purposes (goals) of the school and clearly articulates those purposes (goals).

CHAPTER II

Research Design and Methodology

The design and methodology of the study are outlined in this chapter. The first section presents information on the three instruments used to test the hypotheses. The second section describes the population and sample used in the study. The third section outlines the procedures used in collecting the data. The fourth section describes the limitations and delimitations of the study. The chapter concludes with the plan for the statistical analysis of the data.

Instrumentation

Three instruments were used to test the research hypotheses. The **Bases of Power Questionnaire** was developed to measure seven means by which principals could obtain compliance from their teachers. The **Schweitzer Questionnaire** was used to assess school effectiveness. Fielder's **Group Atmosphere Scale** was used to measure the social climate of the school.

The Instrument for Measuring Bases of Power. This study uses an adapted version of the Perceived Power Scales (PPS) developed by Richmond et al. (1980) to measure the principal's bases of power. The Richmond et al. study used a sample of 250 elementary and secondary public school teachers as well as 171 managers of three diverse and distinct organizations. The study attempted to examine the correlations between power scores and manager communication style as well as the correlation between each power base and a group of employee satisfaction variables.

The PPS was developed for the Richmond study by adapting Student's (1968) description of five power bases to include five, seven-point, bipolar scales rather than the single, five-point, Likert-type scale used by Student. This was done to enable estimation of internal reliability of response. Using the Nunnally (1967) procedure, the teacher sample produced an internal reliability of .98 or better for each power base.

The Student (1968) measure of power bases gave a description or definition of each base of power based on French and Raven's (1959) five fold typology of social power. To these five Student added a sixth, incremental power, based on the suggestion by Katz and Kahn (1966, p. 302). An incremental power score was obtained by summing the group mean for referent power and the group mean for expert power. It was found that incremental influence was related to only seven of the twelve possible performance measures.

The present study omitted the incremental power base but added two others. One, information power, was described by Raven and Kruglanski (1970) as a sixth power base that had been described in the earlier writings of French and Raven (1959) but had not received much attention in the literature. A seventh power base, visionary power, was added by the researcher, based on its frequent mention in recent school effectiveness literature.

A pilot study using the Richmond et al. (1980) format of Power Scales indicated that seven items (one for each power base) was sufficient to measure perceived power bases. This effectively converted the power scale to a Student (1968) type single item rating using a

bipolar, seven-point scale. This same type of rating scale was used in a number of previous studies (Bachman, 1968; Cope, 1972; Hornstein, et al., 1968; Guditus and Zirkel, 1980) allowing the results of this study to be compared with earlier findings (See Appendix I.2).

Test-retest reliability coefficients ranging from .32 to .78 for this instrument over an eight-week period were found (see Table 2). Although legitimate and information power bases failed to reach significance, it must be noted that a larger N would likely create significance. It should also be noted that the hypotheses were largely supported using this instrument, a fact which supports its construct validity.

Table 2

Test-Retest Reliability Coefficients of Power Bases Over an Eight Week Period

Power Base	Reliability Coefficient[a]
Legitimate	.32
Visionary	.64*
Reward	.72**
Expert	.67**
Referent	.71**
Coercive	.78**
Information	.49

[a] Pearson product-moment, N=14

* p <.05 ** p <.01

Student found that single item ratings of the bases of power were significantly related to production performance measures, thereby establishing the validity of such measures. Since the present study used similar single descriptions of the power bases, such descriptions were assumed to be valid for this study.

Schweitzer Questionnaire. This instrument represents a five part measure of the characteristics of effective schools developed by Schweitzer for a recent (1983) study of 16 urban elementary schools in the southern United States. In that study the mean socio-economic status, as measured by the percent of students eligible for free or reduced cost lunch, was 90.4 percent. The effectiveness instrument is a paper and pencil questionnaire containing 49 Likert-type items designed to measure the following five main characteristics of effective schools as determined from the literature: administrative leadership (of instruction); emphasis on achievement; safe and orderly environment; high expectations; and use of assessment instruments.

After a review of a variety of instruments, the Schweitzer questionnaire was selected due to its relative brevity, correlation with student achievement in the United States and its ability to measure the five characteristics most frequently associated with effective schools in the literature.

The school characteristics in Schweitzer's study were measured by the response of 456 teachers and 16 principals to the questionnaire. The school score for each factor was obtained by finding the mean score for each item based on the item response for the teachers in the school.

The mean item scores were then summed to give a school factor score. Similarly a principal score was obtained for each school.

Internal consistency reliabilities (α) of these measures were determined using school mean item scores based on teachers' responses and item scores based on principals' responses (see Table 3). The interrelationships of the five factors measured by teacher responses and the five factors measured by principal responses was computed by a correlation matrix. Split-half reliabilities of each scale in the SQ were calculated using data generated by the present study. The results, which range from .77 to .92, are shown in Table 4.

Schweitzer tested the predictive validity of the measures by using school district records to obtain achievement data. Achievement was measured by the California Achievement Test administered to all students in each of the six grades. Mean percentile ranks for each grade were averaged across grades in each school to determine school level achievement. These scores were then correlated with the school characteristic scores to determine the predictive validity of the measures. It was found that generally, teachers' ratings of their schools on the five characteristics correlated significantly with overall school achievement.

This study used the full Schweitzer measure. A sample of teachers in each school rated their principal's instructional leadership behaviour. See Appendix II.3.

The Group Atmosphere Scale. The Group Atmosphere Scale (GA) was selected for use due to its extensive use in previous research.

In a study of 32 elementary schools McNamara (1966) found that

Table 3

Internal Consistency Reliabilities and Correlations with Achievement for the Five School Characteristics Based on Teacher and Principal Responses

Characteristic	Teachers (N=456)		Principals (N=16)
	α	r*	α
Instructional Leadership	.95	.58**	.73
Emphasis on Achievement	.85	.79**	.78
Safe and Orderly Environment	.95	.59**	.69
High Expectations	.93	.79**	.73
Use of Assessment Instruments	.85	.68**	.71

* Correlation of teacher responses with California Achievement Test mean percentile ranks.

** $p < .01$

From "Characteristics of Effective Schools" by J.H. Schweitzer, Paper presented at the annual meeting of the American Educational Research Association, New Orleans, April, 1984, 1-11.

Table 4

Split-half Reliability Coefficients of Schweitzer School Effectiveness Scales

Scale	Reliability coefficient [a]	Number of Items
Administrative leadership	.92**	18
Positive, orderly environment	.84**	8
Use of assessment instruments	.84**	8
High expectations	.77**	7
Emphasis on achievement	.78**	6

[a] Calculated using Spearman-Brown formula, N=14

** p <.01

provided GA was more positive, LPC scores of principals were negatively related to ratings of school effectiveness by school system officials. He interprets low LPC scores as a high degree of directive control on the part of the principal. Similar findings came from McKague's (1968) study of 39 high schools. He found that in schools where group acceptance (GA) is more positive, directive leadership on the part of the principal is associated with perceptions that the principal and the school are doing an effective job (as determined by the judgements of

raters and the results of province-wide examinations) and that teachers are satisfied with their teaching situation. The instrument, modeled after the Least Preferred Co-worker scale, consists of 10 bipolar abjective items which are highly intercorrelated (Fiedler, 1967, p. 32). Each of the items is scored by assigning a value ranging from eight at the positive end to one at the negative end. The GA score is calculated by summing the item scores. Most research using the GA scale calculates a median score and based on that score, splits the groups into good and poor GA. Normative data collected by Posthuma (1970) established a mean GA of 66 for all organizations. The present study will split the data into low and high GA using a mean of 65 as suggested by Posthuma. This method is supported by Garland and O'Reilly (1976) who adopted the method of splitting GA at 65 after attempting to define good GA in a group of Canadian secondary schools as those schools whose GA score was 69 or higher and low GA schools as scoring 61 or less. The problem encountered was that there were very few schools which scored a GA or 61 or less so the Posthuma mean of 65 was adopted as the split point.

Some studies have used the leader's perceptions of GA to determine a GA score. In other studies the members of the group rate the GA. The latter method has been suggested to be superior (Silver, 1982) and so is used in the present study. Blanchard (1979) also used teachers' perceptions to measure GA. Her study of 103 elementary schools in Wisconsin attempted to support Fiedler's theory of leadership effectiveness. She concluded that the higher the situational control (of which the major determinant is GA), the more effective the leader will be. Blanchard found a mean GA of 63.23 and standard deviation of 13.04.

Her study also found GA correlated with principal's perception of GA (.463), Educational Professional Leadership scores (.685), and teachers' perceptions of job satisfaction (.786).

The internal consistency of Group Atmosphere scores seems high. Fiedler (1967) reported intercorrelations of scores among three sessions with Belgian naval leaders of .76, .73, and .83. Corrected split-half reliability of the scale was .90. McNamara (1968) reported a test-retest coefficient of .42 (N=31) for elementary principals over a period of one and one-half years. Garland and O'Reilly (1976, p. 20) reported a test-retest reliability coefficient of .67 over an interval of six weeks. A copy of the GA scale is included in Appendix I.1.

Target Population and Sample

The population studied was elementary schools in the province of Ontario. The province is divided into six regions for administrative purposes by the Ministry of Education. The 186 school boards listed in the 1984-1985 Directory of Education operate 3816 elementary schools. Schools were chosen to participate if they satisfied the criteria of willingness, size, level and stability.

Willingness. A letter was sent to the Director of Education on December 20, 1984 in each of 119 school boards having three or more schools serving children in grades one to six to request permission to conduct the study and a list of schools meeting the criteria (See Appendix II.1). The letter gave an explanation of the purpose of the study and enclosed samples of the instruments to be used. It also

requested permission to do the study and a list of schools both meeting the criteria and willing to cooperate.

Using the twenty-five school boards who had replied in the affirmative by February 1, 1985, qualifying schools from each board were randomly selected. A total of 89 schools were sent invitations to participate in the study and instruments on February 6, 1985.

Size of School. Schools must have a minimum of six full-time teachers available to complete the instruments. Halpin (1966) and Halpin and Croft (1963) suggested that using between four and ten teachers would provide an adequate measure of school management practices.

Level. The schools must be elementary and include grades one to six. Any teacher in these schools could complete the instruments.

Stability. To be eligible for inclusion in the study, principals must have been in the school as principal for a minimum of two years. This would allow sufficient time for an administrator to establish a leadership style that would have noticeable effects (Likert, 1967).

Data Collection

A total of 25 boards representing 604 schools comprised the population from which eligible schools from each board were selected. The result was a list of 89 schools representing all 25 boards and all six administrative regions of the Ministry of Education (see Tables 5,6).

A kit of instruments and letters was sent to each of the selected schools on February 6, 1985. Each kit contained the following:

1) A letter to the principal requesting cooperation in the study, selection of a staff member to distribute and collect the

instruments, completion of a demographic information sheet, and completion of the **Group Atmosphere** scale (item 2, Appendix II).

2) A letter to the teacher designated to distribute and collect the instruments (item 3, Appendix II). A stamped, self-addressed envelope was enclosed.

3) An envelope for each sampled teacher containing; a letter explaining the study and requesting their cooperation, the **Group Atmosphere** scales, the **Bases of Power Questionnaire**, the **Schweitzer Questionnaire**, and an open ended question asking them to describe specific behaviors of the principal which encourage their cooperation (item 4, Appendix II).

Each letter allowed the participant to request a copy of the final results of the study. Because demographic data were not supplied by some principals, letters requesting the missing information were sent to the ten principals who could be identified. All responded with the missing information.

By April 16, 68 schools or 76% of the schools invited, had returned questionnaires. Of those, 63 schools or 70% of those invited were usable meaning that the teachers had correctly completed the required questionnaires. Thus 63 schools and 432 teachers from 25 different Ontario school boards constituted the useable sample for this study. Table 5 indicates that schools were selected from all six regions of the province of Ontario. The boards also represented the full spectrum of size (Table 6). The schools also represented the full range of sizes with 12 schools having up to 10 teachers, 29 schools having 11-20

Table 5

Regional Distribution of Boards and Schools in the Sample

Region	Number of school boards	Number of sampled boards	Number of sampled schools
1	48	10	25
2	30	3	8
3	26	2	3
4	22	1	4
5	21	4	9
6	19	5	14
	166	25	63

Table 6

Size of School Boards in Sample

Size (number of elementary schools)	Number of boards	Number of sampled schools
1 - 10	5	12
11 - 20	6	12
21 - 30	2	4
31 - 40	3	10
41 - 50	4	13
51 +	5	12
	25	63

teachers, and 14 schools having 21 or more teachers. Furthermore, 23 schools were located in urban areas, 32 schools in rural areas.

When returns were received, each school was given an identification number. Each respondent was also identified. This information along with the individual item scores for the Schweitzer Questionnaire and for the Bases of Power Questionnaire, along with the teacher's score for the Group Atmosphere scale, the principal's rating of group atmosphere, school enrolment, a rating of parent socio-economic status and principal data including years as principal of this school, sex, highest degree attained, number of schools administered as a principal and number of curriculum committees on which they had served was coded onto computer optical scanning sheets.

The optical scanning services of the University of Ottawa were used to create the data file. The individual item scores for the Schweitzer Questionnaire were transformed to sums for each of administrative leadership of instruction, emphasis on achievement, safe and orderly environment, high expectations and use of assessment instruments using the "Transform" paragraph available in the Bio-Medical Data Processing program P6M (canonical correlation).

Limitations and Delimitations

Limitations. Each of the three instruments used in this study is subject to limits of reliability and validity. Each of the three variables measured is limited in scope. The base of power is but one aspect of a principal's means of influencing a school. The Group Atmosphere score does not describe the totality of school social

climate. The Schweitzer Questionnaire does not reflect all aspects of an effective school. The Bases of Power Questionnaire became a single item rating of each power base. The data were generated by the subjective perceptions of untrained personnel. The data were collected by a mail survey, and not all the schools contacted were expected to reply.

Delimitations. The data were collected from a limited number of schools in a similarly limited number of school jurisdictions in the province of Ontario. Both schools and school boards were selected from those who agreed to participate in the study. Since participation was obtained from each administrative region, the data should represent a cross-section of both Public and Separate elementary schools in all regions of Ontario. Data were requested from schools serving children in grades no higher than grade eight and with experienced principals who have been in their schools for at least two years.

Statistical Procedure

The hypotheses were tested by Pearson product-moment correlations. Since this was an exploratory study and used literature which suggested that the variables should be related but did not specify exactly what variables were related and in what magnitudes, it was felt that simple correlations would be appropriate.

The data were further analyzed using the stepwise multiple regression program of the Statistical Analysis System (Ray, 1982). This procedure was used so that the power bases most strongly correlated with the characteristics of effectiveness could be determined under conditions of more positive and less positive group atmosphere.

Summary

Elementary teachers and principals in the province of Ontario constitute the population. Sixty-three schools, 432 teachers and 63 principals constituted the useable sample for this study. Three instruments, plus a data sheet for principals, were used to collect the necessary data. Pearson product-moment correlations were used to test the hypotheses.

CHAPTER III

Presentation and Analysis of Data

The purpose of the chapter is to describe the statistical procedures and analysis of data that were used to determine if there is a relationship between school effectiveness criteria and bases of a principal's power when the quality of social climate is used as an intervening variable. The first three sections present data obtained on the three major variables; bases of a principal's power, school effectiveness, and group atmosphere. The fourth section discusses the relationships pertaining to the hypotheses. The fifth section describes the results of a multiple regression analysis. The sixth section describes data which were obtained by means of an optional question.

Presentation of Bases of Power Data

Rankings of the power bases. The principal's seven power bases were measured by the Bases of Power Questionnaire. Each base was measured by a single item using a seven point bi-polar scale. A description of the power base scores is given in Table 7.

It is interesting to note that the scores for the legitimate, visionary referent and information bases were slightly skewed to the left. The scores for these bases would be rated slightly more positively than would be expected in a normal distribution. The scores for the reward, expert and coercive bases were observed to the right, indicating a slightly more negative than normal distribution of scores. This would add support for the notion that the power bases can be divided into two clusters. This will be discussed further on page 61.

Table 7

Descriptive Statistics of the Bases of Power Questionnaire (N=432)

Power Base	$\bar{x}$	SD	Rank	Range	Skewness	Kurtosis
Information	4.84	1.62	1	1 - 7	- .62	- .32
Visionary	4.79	1.64	2	1 - 7	- .57	- .48
Legitimate	4.48	1.77	3	1 - 7	- .42	- .76
Referent	4.43	1.77	4	1 - 7	- .41	- .71
Expert	3.62	1.82	5	1 - 7	.08	-1.11
Reward	2.84	1.80	6	1 - 7	.60	- .82
Coercive	2.52	1.85	7	1 - 7	.98	- .34

All distributions were flatter than normal as indicated by the negative kurtosis scores. Thus one would expect somewhat larger than normal standard deviations indicating a spread of scores.

The most highly ranked base of power for the principal to use to obtain the teachers' compliance was "useful information". Having a clearly defined purpose and clearly articulating it (visionary power) was ranked a close second. Legitimate power or power stemming from one's position ranked third, followed by power obtained through the teachers' admiration of the principals' personal qualities (referent). Power as a result of one's reputation as an expert was ranked fifth with power due to reward or coercion ranked last.

Table 8

Comparison of Rankings of Power Bases

Study Base	Cross (1985)	Balderson (1975)	Guditus & Zirkel (1980)	Richmond et al. (1980)
Information	1		Not Used	
Visionary	2			
Legitimate	3	2	1	1
Referent	4	3	3	2
Expert	5	1	2	3
Reward	6	5	4	5
Coercive	7	4	5	4

Table 8 compares the ranking of the power bases used in this study with the results from previous studies. In all studies, reward and coercive power were ranked lowest as a means for compliance in schools. Referent power in all studies appears in the middle of the rankings. Legitimate power remains at or near the top in all the studies. What changes dramatically in the present study is the ranking of expert power. The partition of expert power into both expert and information in this study and the addition of visionary power seems to cause power based on "reputation" (as expert is defined in this study) to be lowly ranked. The provision of useful information seems to be the most effective means of obtaining the cooperation of teachers. The addition

of visionary power (having clearly articulated goals) and its high ranking also seems to help explain what it was that previous studies were measuring as expert power.

In a recent (1985) Canadian study, Gunn and Holdaway report that the most important bases of influence for high school principals were found to be personal qualities and expertise. The first refers to ways of working with people to win trust and support (referent power), the second refers to expertise as an administrator. The importance of referent power in Gunn's study corresponds to its relatively high ranking in the present study.

The high ranking of visionary power indicates that teachers do perceive principals as both having and communicating a clear set of purposes for their school. Principals are also perceived as supplying useful information to teachers. The fact that teachers ranked principals' use of their legitimate power lower than information or vision for obtaining compliance would appear to be a positive change from two of the most recent studies performed in schools (Guditus and Zirkel, 1980; Richmond et al., 1980). Since effective schooling is associated much more strongly with information and visionary power, this result is indeed a hopeful sign. The principal's personal attributes still retain importance for obtaining a teacher's compliance, as evidenced by the fourth place ranking of referent power. The low ranking of reward and coercive power indicates the teachers' continued perception that principals do not use the "carrot and stick" method to obtain their compliance.

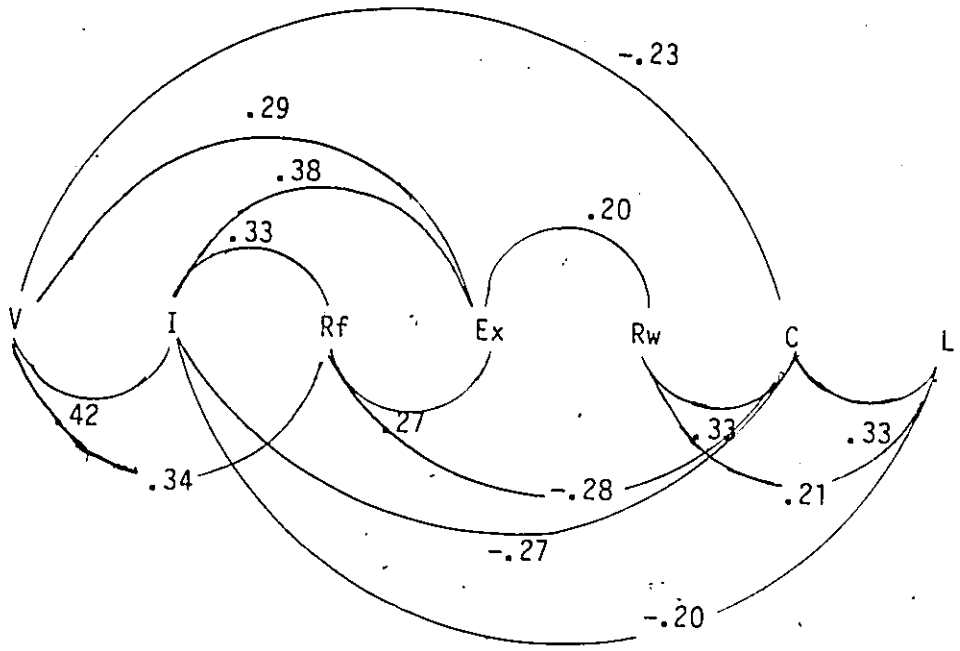

Figure 1

Significant Correlations Among Power Bases [a]

[a] V = visionary

I = information

Rf = referent

Ex = expert

Rw = reward

C = coercive

L = legitimate

Table 9

Correlations Among Power Bases (N=432)

	Legiti-mate	Vision-ary	Reward	Expert	Referent	Coercive	Infor-mation
Legitimate	1.00						
Visionary	- .06	1.00					
Reward	.21*	- .08	1.00				
Expert	.04	.29**	.20*	1.00			
Referent	- .13	.34**	.01	.27**	1.00		
Coercive	.33**	- .23*	.33**	- .07	- .28**	1.00	
Information	- .20*	.42**	- .09	.38**	.33**	- .27**	1.00

* $p < .05$

** $p < .01$

Correlations among power bases. As shown in Table 9 significant correlations occur between some power bases. Figure 1 attempts to represent these correlations graphically. Two main clusters of power bases are evident. One includes visionary, information, referent and expert power. The others include reward, coercive and legitimate power. The two clusters are not related to each other.

Peabody (1962, p. 465) first described this separation. He described legitimacy, position, and the sanctions inherent in office as bases of formal authority. Functional authority was composed of professional competence, experience, and human relations skills. Isherwood (1973), found in a study of fifteen secondary schools, two clusters of authority variables. One cluster was composed of traditional or positional authority and legal authority. The other cluster was composed of charismatic (personal traits), expertise, normative (accrued obligations), and human relations authority. The present study adds further support to the idea of two distinct clusters of power variables.

Presentation of School Effectiveness Data

One of the variables in the study, was teachers' perceptions of indicators of school effectiveness as determined by scores on the Schweitzer Questionnaire. Tabulation of the data collected was accomplished by means of a SAS program for multiple regression (Ray, 1982). The scores for each of the five major characteristics of effective schools: administrative leadership; use of assessment instruments; emphasis on achievement; high expectations; and safe, orderly environ-

ment were obtained by summing the individual item scores for each teacher. An additional analysis was performed correlating the bases of power scores with scores on the effectiveness variables for each school. A school effectiveness score was calculated by summing the five subscores. The computer programming was validated by the manual scoring of the first five teachers in the data file. Table 10 presents the descriptive statistics of the five effectiveness variables. Table 10 indicates that the variables used to measure effectiveness have an acceptable standard deviation. Although all scores were negatively skewed, the values were less than 1.00 and thus within the range of acceptability. The negative skew would indicate that the scores are slightly more positive than would be expected in a normal distribution.

Table 10

Descriptive Statistics of the Five Effectiveness Variables (N=432)

Variable	$\bar{x}$	SD	Range	Skewness	Kurtosis
Administrative Leadership	60.86	11.08	29-88	- .25	- .20
Positive, Orderly Environment	30.97	4.26	11-40	- .52	1.21
Use of Assessment Instruments	25.88	4.80	8-38	- .40	.39
Emphasis on Achievement	22.80	3.27	9-30	- .65	.94
High Expectations	25.74	3.82	10-34	- .57	.93

The scores for a positive, orderly environment were exceptionally peaked (Kurtosis 1.21) and thus most scores were clustered about the mean value.

The Schweitzer Questionnaire (SQ) was used to measure five characteristics of effective schools. Table 11 indicates the correlations among the variables as obtained from the data in this study as well as obtained by Schweitzer (1984).

Only in two cases did correlations of greater than .3 occur in data from both this study and Schweitzer's study. The relationships between administrative leadership of instruction and the use of assessment instruments, and emphasis on achievement and the use of assessment instruments were both of a similar magnitude and in the same direction in both studies. These results are interesting in the Canadian context. Typically, the press for use of assessment instruments has come from the central office. The person charged with seeing to it that these instruments are administered and used for diagnosis at the school level is the principal. The relationship between administrative leadership and use of assessment instruments found in these studies (Cross: r=.54; Schweitzer: r=.45) would seem to support the perception by teachers that, high scores on the use of assessment instruments i.e. when principals take an active part in the promotion, administration and use of results of these instruments, they are also seen to be demonstrating administrative leadership of instruction.

The data from this study indicate relationships between: administrative leadership of instruction and emphasis on achievement (r=.43); administrative leadership of instruction and a safe, orderly

Table 11

Correlations[a] Among Variables in the Schweitzer Questionnaire and Group Atmosphere (N=432)

	GA	ADLDR	ENV	ASSINST	EXPECT	ACHEMP
GA	1.00					
ADLDR	.49**	1.00				
ENV	.48**	.38** (-.24)*	1.00			
ASSINST	.33**	.54** (.45)**	.25* (-.21)*	1.00		
EXPECT	.19	.19 (.37)**	.22* (.32)**	.25* (.67)**	1.00	
ACHEMP	.47**	.43** (.11)	.41** (.07)	.38** (.35)**	.20* (.17)	1.00

GA = Group Atmosphere as perceived by teachers

ADLDR = administrative leadership of instruction

ENV = positive, orderly environment

ASSINST = use of assessment instruments

EXPECT = high expectations

ACHEMP = emphasis on achievement

[a] Pearson r, scores in brackets indicate correlations described by Schweitzer (N=456)

* p <.05

** p <.01

environment (r=.38); as well as emphasis on achievement and a safe, orderly environment (r=.41). It would seem that these three variables are related. In schools where principals are perceived as giving clear, strong instructional leadership and focusing their attention on instructional matters, the school is also perceived to have a positive, orderly, learning-oriented environment as well as a clear emphasis on student achievement, especially in the basic skills.

The data from Schweitzer's study indicated that high expectations was related to administrative leadership of instruction (r=.37), use of assessment instruments (r=.67), and a safe, orderly environment (r=.32) These variables were not as strongly correlated in Cross' study.

The low correlation of the expectations variable with school effectiveness variables in the present study may simply reflect differences between the educational systems studied. From comments added to the margins of the expectations section of the Schweitzer Questionnaire study, teachers often had difficulty judging how other teachers viewed student achievement, or how their students compared with those of other schools. The comments included: "I don't know any of these"; "don't know"; "I teach severely multi-handicapped students" (therefore section not applicable); "It was hard to try and see the school with a general overview when I am used to seeing it in a more personal manner"; "hard to really answer this question, not sure of other schools"; and "unable to complete as I am unaware of expectations, an area not discussed as a staff - filled in as individual outlook".

It is also interesting to note that this variable, more than any of the other four, requests information about factors over which

teachers have almost total control rather than factors over which the principal has some or most of the control. It may be that for the population in this study, the principal's influence concerning instruction does not relate to how teachers view their students' potential for academic achievement.

Since Schweitzer's data were collected in urban schools which served a low income southern USA population, demographic factors may have had an effect on the relationships between variables. The data in this study were collected in schools which served a population described in Table 12. This Canadian population could be considered to be largely middle class, and from urban, suburban and rural areas. It is also possible that, particularly for the expectations variable, middle class parents would already express high expectations for their children. The further expression of high expectations in such schools by teachers may not significantly affect student achievement.

Presentation of Group Atmosphere Data

The other variable in the study was the quality of the social climate as determined by scores on Fiedler's (1967) Group Atmosphere scale. The score is the sum of the ratings of each of the ten bi-polar scales. The maximum possible score is 80 indicating the most favourable environment. The minimum possible score is zero indicating the least favourable environment. Table 13 gives the descriptive statistics associated with this instrument in the present study.

Fiedler's Group Atmosphere (GA) scale was used to measure the social climate of the school as perceived by teachers. A mean GA score

Table 12

Description of Parents in Sampled Ontario Schools [a]

SES[b]	A	B	C	D
Percent of Parents in Category	15	23	55	7

[a] As estimated by the principals (N=43)

[b] Socio-economic status

A Doctors, lawyers, teachers, engineers, accountants, managers, librarians, social workers, etc.

B Bookkeepers, travellers, firemen, police, nurses, realtors secretaries, mailmen, etc.

C Bus drivers, construction workers, mechanics, machine operators, farmers, cooks, caretakers, etc.

D Unemployed, unskilled

Table 13

Descriptive Statistics of the Fiedler Group Atmosphere Scale (N=432)

$\bar{X}$	SD	Range	Skewness	Kurtosis
62.55	12.65	17-80	0.72	0.02

of 62.55 was obtained. Normative data collected by Posthuma (1970) established a mean GA score of 66. Faulkner (1981) in a study of 615 elementary school teachers in twenty Ontario school boards, obtained a mean GA of 68.3. Loyer (1982), in a study of 138 Ontario nursing supervisors, obtained a mean GA of 66.25. Two Canadian studies have obtained mean GA scores below 66. A study of 24 secondary schools (Garland and O'Reilly, 1976) obtained a mean GA score of 64.2. McKague (1968), studying a group of 39 high schools, reported a mean GA of 64.0. Blanchard (1978), in a study of Wisconsin elementary schools obtained a mean GA of 63.23 with a SD of 13.04 and a range of 10-80 when GA was rated by the teachers. The mean, SD and range in the present study compare reasonably closely to that reported in the Blanchard study. Skewness and kurtosis of scores are within the normal range.

The mean GA obtained in this study is slightly below the means obtained by other researchers for similar groups. The significance of this finding is difficult to judge. It should be noted, however, that only the Blanchard study, of those reported above, used teacher perceptions as the source of GA score. It is probable that principals

would perceive GA as more positive than their teachers. Blanchard found this to be the case. She found that the average GA as rated by teachers correlated only r=.463 with the higher GA as rated by principals. It is possible that a number of factors may have combined to create this lower than expected score. Ontario is presently faced with an aging teaching force. The shrinking of enrollments has created a condition where there are few openings for new teachers, fewer opportunities for advancement and few opportunities for transfer to other schools. These may combine to produce a population of teachers who have achieved a number of successes in their careers, who have completed their graduate work and have participated in many professional development activities and now realize that there are few new challenges left for them in teaching. The tight economy may prevent them from seeking challenges in a new profession. Thus they may feel trapped. This situation may reflect itself in the lower GA score. Items like satisfying - frustrating, enthusiastic - unenthusiastic, and interesting - boring in the GA scale may be particularly sensitive to the above situation.

Bridges (1973) has described the cyclical nature of the school year. During each school term there are predictable events with their associated emotional highs and lows. It is possible that the collection of these data during the month of February, caught teachers at an emotional low point. This fact may have been reflected in a lower than expected GA score.

Relationship between power bases and GA

As can be seen in Table 14, group atmosphere as perceived by teachers is modestly correlated to four bases of power. The results obtained in this study indicate that the teachers' perceptions of school climate (GA) is modestly correlated with principals' clear articulation of goals and purposes (r=.36), provision of useful information (r=.29), possession of personal traits which gain teachers' admiration (r=.29), and with principals' lack of use of penalties or sanctions (r=.27). Since these results relate directly to hypotheses two and four, they will be discussed later in this chapter.

Table 14

Correlations[a] Between Group Atmosphere and Bases of Power (N=432)

	Visionary	Referent	Information	Expert	Coercive	Reward	Legitimate
GA[b]	.36**	.29**	.29**	.15	-.27**	-.12	-.09

[a] Pearson

[b] GA = Group Atmosphere as perceived by teachers

** $p < .01$

Relationship between teachers' perceptions of effectiveness and GA

As can be seen in Table 11 correlations were found between GA and administrative leadership (r=.49); a safe, orderly environment (r=.48); and emphasis on achievement (r=.47). GA showed a smaller, yet definite correlation with the use of assessment instruments (r=.33). High expectations was only weakly correlated with GA (r=.19).

Manasse (1984, p. 44), in a review of the literature on principals as leaders of high performing systems describes "interpersonal skills that generate commitment to a common set of values" as distinguishing effective leaders. An examination of the GA scale reveals items dealing with satisfaction, enthusiasm, productivity, cooperation, interest, support and success. All these would relate to generating commitment, one of the skills of leadership of an effective organization. Similarly, Garland and O'Reilly (1976) report that in high schools, principals who administered schools in which the GA was more positive also administered schools perceived by students as effective in producing learning. A recent study by Coleman (1985) of nine elementary schools in British Columbia found that for parents, the principal's activities and style accounted for 60% of the variance in school climate. For teachers in the study, teacher-principal collegiality accounted for 40% of the variance they perceive in school climate. The relationship between characteristics of effective schools and the teachers' perceptions of social climate (GA) is supported by the Coleman study.

As early as 1965, Gross and Herriott had outlined the concept of Executive Professional Leadership (EPL). EPL referred to the behavior of a principal which stressed improvement of the quality of teacher

performance. Behaviors such as constructive suggestions, strong interest in quality improvement, helping teachers with problems and classroom performance improvement, making staff meetings a valuable educational activity, and generally a strong interest in professional development were positively and significantly related to staff morale, professional performance of teachers, and pupil learning. Many of these same behaviors are included in the administrative leadership and emphasis on achievement variables of the Schweitzer Questionnaire.

Studies using Fiedler's model of situational leadership also indicate support for the present study's findings. McKague (1968) found in a study of 39 Saskatchewan high schools that as long as GA was more positive, a low least preferred coworker (LPC) score on the part of the principal resulted in ratings by teachers of higher morale, greater satisfaction and increased effectiveness. McNamara (1966) described the attributes of such low LPC principals. Their staff described them as more instruction-oriented, more prescriptive, more vocal in supervision, supervised teachers activities more closely, and made more vigorous efforts to involve teachers in discussing and deciding school problems. The items in the administrative leadership and emphasis on achievement sections of the SQ closely resemble McNamara's attributes.

Garland and O'Reilly (1976), in a study of high schools using Fiedler's contingency model of leadership with Stern's High School Characteristics Index as the effectiveness indicator, draw similar conclusions to those in the present study. They conclude that those principals who ended up with a staff which enjoyed a more positive GA, ran good schools. Further, they suggest that the best methods to

achieve a more positive GA would be contingent upon the characteristics of the leader. The present study also found a relationship between more positive GA and school effectiveness characteristics. Some of the characteristics of the leader which may contribute to that more positive GA may be suggested by the bases of power which are positively related to both GA and characteristics of school effectiveness. A further indication of behaviours which may promote a more positive GA is given in the section which discusses the answers to the question of what behaviours of the principal encourage cooperation from teachers.

Testing the Hypotheses

The first hypothesis stated that there will be a significant positive relationship between each of the characteristics related to school effectiveness as measured by the Schweitzer Questionnaire (SQ) and the visionary, referent, information, and expert bases of power as measured by the Bases of Power Questionnaire (BPQ). Tables 15 and 16 gives the significant correlations found by this study.

Teachers' perceptions of administrative leadership of instruction was found to be significantly positively correlated with their perceptions of the visionary (.52), referent (.34), information (.42), and expert (.33) bases of power as predicted.

A positive, orderly school environment as perceived by teachers was found to be significantly positively correlated with their perceptions of the visionary (.27) and referent (.22) bases of power. It was, however, not significantly correlated with expert or information bases of power.

Table 15

Correlations Between Indicators of School Effectiveness[a] and the Bases of Power[b] (N=432)

	ADLDR[a]	ENV	ASSINST	EXPECT	ACHEMP
VISIONARY	.52**	.27*	.28**	.06	.25*
INFORMATION	.42**	.17	.21*	.04	.20*
EXPERTISE	.33**	.13	.19	.03	.16
REFERENT	.34**	.22*	.18	.04	.15
COERCIVE	-.32**	-.29**	-.17	-.09	-.15
LEGITIMATE	-.21*	-.16	-.17	-.07	-.09
REWARD	-.04	-.15	.04	.00	-.04

[a] ADLDR = administrative leadership of instruction, ENV = positive, orderly environment, ASSINST = use of assessment instruments, EXPECT= having high expectations, ACHEMP = emphasis on achievement.

* $p < .05$ ** $p < .01$

The teachers' perceptions of the use of assessment instruments was found to be significantly positively correlated with their perceptions of the visionary (.28) and information (.21) bases of power. No significant positive correlation was found with the referent or expert bases of power.

Emphasis on achievement as perceived by teachers was found to be significantly positively correlated with their perceptions of the visionary (.25) and information (.20) bases of power. No significant positive correlation was found with the referent or expert bases of power.

Teachers' perceptions of high expectations was not found to be significantly correlated with any power base.

Teachers' perceptions of the principals' use of visionary power was positively correlated to all variables of the Schweitzer Questionnaire except having high expectations. Information power was positively correlated to three of the five variables of the Schweitzer Questionnaire.

Referent power was significantly positively correlated with two variables [administrative leadership of instruction (.34) and positive, orderly environment (.22)]. Expert power was positively correlated only with administrative leadership of instruction (.33). When teachers' perceptions were averaged by school for each variable indicating school effectiveness, and a Pearson product-moment correlation performed with power bases, the results given by Table 16 were obtained. Although the hypotheses were tested using teacher rather than school data, the correlations obtained were relatively the same magnitude and the signs were always in the same direction. In most cases the correlations using

school data were larger than the correlations using individual data. Visionary power was related most strongly (r=.75) to perceptions that the principal exhibited administrative leadership of instruction. It was also related to use of assessment instruments (r=.54).

The principal's perceived use of information power was also reasonably strongly (r=.64) related to perceptions that they exhibited administrative leadership of instruction.

Since the other correlations found were less than .5, and thus explain less than 25% of the variance, they will not be discussed here. It may be sufficient to say that the pattern of relationships is similar to that given in Table 15 using data based on individual teacher responses (N=432). These findings support previous research findings.

Bachman et al. (1966) in a study of salesmen found that the greater the reliance of the office manager on expert and referent power, the greater were the salesmen's performance and their satisfaction with the manager. Expert power in the Bachman study was defined as respect for the managers' competence and good judgement about things with which they are more experienced than I. This definition is different from that used in this study. The definitions of referent power in both studies were basically the same.

Bachman et al's findings were supported in a study of primary school teachers by Hornstein et al. (1968). Using similar descriptions of the bases of power to Bachman, they found that the more that principals relied on expert power, the more favorable were the evaluations of the school system, the greater the satisfaction with the principal, and the greater was the perception that students were more

Table 16

Correlations Between Indicators of School Effectiveness and Bases of Power[b], School Scores (N=63)

	ADLDR[a]	ENV	ASSINST	EXPECT	ACHEMP
VISIONARY[b]	.75**	.27*	.54**	.04	.36**
INFORMATION	.64**	.20	.38**	.06	.26*
EXPERTISE	.46**	.30*	.21	.08	.09
REFERENT	.42**	.37**	.15	.00	.26*
COERCIVE	-.28*	-.35**	-.23	.01	-.22
LEGITIMATE	-.17	-.10	-.20	.05	-.12
REWARD	.05	-.11	.05	.08	.04

[a] ADLDR = administrative leadership of instruction, ENV = positive, orderly environment, ASSINST = use of assessment instruments, EXPECT = having high expectations, ACHEMP = emphasis on acheivement.

* $p < .05$ ** $p < .01$

satisfied with their teachers. The referent power base failed to reach significance in this study.

The third and most recent study to relate power bases of the principal to indicators of organizational effectiveness was reported by Balderson (1975). The results of his study indicated that principals who were perceived by teachers to rely on expert power received high scores for teacher morale, teacher satisfaction with principal's performance and the degree to which the principal favored:

1) teachers doing an effective job helping students learn;
2) teachers experimenting with new ideas and techniques;
3) teachers suggesting ideas to improve the school.

These schools also received high scores for the degree to which teachers feel their principals are open to their ideas and the degree to which they feel their principals have delegated enough authority to teachers to enable them to do their work. These schools also reported a high frequency of attempts by the principal to influence the way teachers teach. Although the above description is not a performance measure per se, many of the behaviors describe those included in the Schweitzer Questionnaire and thus can be considered to be associated with schools which are effective at promoting student achievement. It is interesting to note that Balderson's results showed personal power (defined similar to referent power in this study) as the second most important base for a principal to achieve the above outcomes. The provision of useful information may have been implied in the definition of expert power of earlier studies and thus contributed to the high ranking of expertise as a power base in those studies. In the present

study, information power correlates moderately with administrative leadership (r=.64). It also correlates with the use of assessment instruments (r=.38), and emphasis on achievement (r=.26). It would seem that when principals are perceived as providing useful information; then the school is also perceived to a reasonable extent as having a principal who exhibits administrative leadership of instruction, and to some small extent is also perceived as emphasizing the use of assessment instruments and also emphasizing achievement.

The prinicipal's perceived use of visionary power was correlated with administraive leadership of instruction (r=.75), use of assessment instruments (r=.54), emphasis on achievement (r=.36) and the school's perceived positive, orderly environment (r=.27). The reasonably strong correlation between the principal's perceived possession and clear articulation of goals and purposes (visionary power) and administrative leadership, as well as its weaker correlation with use of assessment instruments may indicate some areas principals are involved in the goal setting and articulating process.

These results support the findings of Wellisch et al. (1978). They found that schools which were significantly more likely to show achievement gains had principals who felt strongly about instruction and who regularly reviewed and discussed teaching performance. The investigators commented that administrators in these more effective schools were communicating their views concerning instruction through the above methods. This communication of vision closely parallels the definition of visionary power used in the present study and which correlates to some degree with three variables of school effectiveness.

The second hypothesis stated that there will be a significant positive relationship between group atmosphere as measured by Fiedler's Group Atmosphere (GA) scale and the visionary, referent, information and expert bases of power as measured by the BPQ. As Table 14 shows, this hypothesis was partially supported.

Group atmosphere is defined as a measure of school social climate. It was found to be positively correlated with the visionary, (r=.36) information, (r=.29) referent (r=.29), and expert (r=.15) bases of power. Therefore the second hypothesis was partially supported. Previous studies (Bachman, Bowers and Marcus, 1968; Bachman, Smith and Slesinger, 1966; Balderson, 1975; Burke and Wilcox, 1971; Cope, 1972; Guditus and Zirkel, 1980; Hornstein et al., 1968; Ivancevich, 1970; Richmond et al., 1980) have found that the referent and expert bases of power, were significantly correlated with subordinates increased satisfaction with superior's performance. To the extent that GA is a measure of satisfaction with superior's performance, this study supports the correlations with referent power and with that portion of expert power now described by information power. Such findings suggest that the more principals are able to obtain a teacher's admiration of their personal qualities (referent power), the greater will be the acceptance of the principal's performance by the teachers.

Information power and visionary power were also found to be positively correlated with GA in this study. This would indicate that provision of useful information and the clear articulation of purposes of the school are associated with increased acceptance and respect for the principal by the teachers.

The third hypothesis stated that there will be a significant negative relationship between each of the school effectiveness characteristics as measured by the SQ and the legitimate, reward and coercive bases of power as measured by the BPQ. The hypothesis was partially supported. Table 15 indicates that for individual respondent scores, administrative leadership of instruction is negatively correlated with legitimate ($r = -.21$) and coercive ($r = -.32$) power but not reward power. A positive, orderly environment was negatively correlated only with coercive power ($r = -.29$). Use of assessment instruments, having high expectations and emphasis on achievement were not significantly negatively correlated with any power base.

The school-based scores in Table 16 show that administrative leadership of instruction is negatively correlated with coercive ($r = -.28$) and legitimate ($r = -.17$) power. A positive, orderly environment is negatively correlated with coercive ($r = -.35$), legitimate ($r = -.10$), and reward ($r = -.11$) power. The use of assessment instruments is negatively correlated with coercive (-.23) and legitimate (-.20) power. Emphasis on achievement is negatively correlated with coercive (-.22) and legitimate (-.12) power. The holding of high expectations were not negatively correlated with any power base.

Regardless of whether analyzed using individuals or schools, the negative correlations between coercive and legitimate power, and indicators of effective schools were generally negative and of a reasonably small magnitude.

These results support findings from Bachman et al. (1966). The significant negative correlation between legitimate and coercive

power bases and some criteria of school effectiveness in the present study are similar to the negative correlations between legitimate and coercive power and salesmen's performance as well as satisfaction with the manager in the Bachman study.

Hornstein et al. (1968) also found a significant negative correlation between legitimate and coercive power bases and evaluation of the school system, satisfaction with the principal and teachers' perception of student satisfaction with the teacher. Similarly, Balderson (1975) found that effectiveness indicators such as teacher morale, satisfaction with the principal, openness of the principal, etc. were associated with low ratings of the legitimate and coercive power bases.

The lack of any significant correlation between reward power and school effectiveness in the present study is an interesting departure from the findings of previous studies. Bachman et al. (1966) and Hornstein et al. (1968) both reported significant negative correlations between reward power and performance measures. Balderson (1975) did not classify any school as relying on reward power but did find that five percent of teachers classified the prospect of receiving rewards as the reason for compliance with their principals. Balderson speculated that principals had little at hand to use for rewards and hence do not try to shape teacher behavior by manipulating rewards. He also suggested that principals may have found that teachers did not respond to those rewards they did use. Teachers may feel that such manipulation is a repugnant means of inducement and thus proves ineffective for principals.

The fourth hypothesis stated that there will be a significant negative relationship between GA and the legitimate, reward and coercive

bases of power as measured by the BPQ. Since all three bases were, in fact, negatively correlated to GA, the hypothesis can be considered to be partially supported.

Coercive power was negatively correlated (r= -.27) with school social climate (GA). As indicated in Table 1, previous studies have also shown a negative correlation between the coercive power base and subordinate satisfaction with the performance of their superior. This would indicate a link between GA and this previous measure of subordinate satisfaction. It seems that principals who wish to have a school with a more positive social climate should avoid relying on their ability to mete out punishment as a means of gaining compliance.

Legitimate power was very weakly negatively correlated (r= -.09) with GA in this study. Reward power was also weakly negatively correlated (r= -.12) with GA. Thus the perception by teachers that principals use legitimate or reward power is weakly correlated with teachers' perceptions of a less positive social climate in their school.

Etzioni (1961) described leaders who derive power exclusively from the office they hold as officers. Officers tend to control instrumental activities or activities aimed at adaptation of the organization and goal achievement, while other informal leaders tend to control expressive activities or activities dealing with social integration and maintenance of values. In coercive organizations like prisons, Etzioni argues that officers will dominate informal leaders. The result is an atmosphere of antagonism and defiance between leaders and led. A similar reaction should be expected in schools where leaders rely on position and coercion to gain compliance.

The fifth hypothesis stated that there will be a positive relationship between the indicators of effective schools and GA. As Table 8 indicates, teachers' perceptions of GA were positively correlated with their perceptions of administrative leadership of instruction (r=.49), a positive, orderly environment (r=.48), emphasis on achievement (r=.47), use of assessment instruments (r=.33), and the presence of high expectations in the school (r=.19). Therefore, the fifth hypothesis is supported.

Extended Analysis

In testing of the previous five hypotheses, the study provided an opportunity for an extended analysis which resulted in a generation of additional propositions and findings. The results of the analyses used to test the main hypotheses indicated a tendency for certain power bases to be related to certain indicators of school effectiveness. This relationship may be mediated by the condition of the group atmosphere in the school.

A multiple regression analysis was used to attempt to predict which bases of power are associated with each criteria of school effectiveness in conditions of more positive and less positive atmosphere.

Predicting administrative leadership of instruction. Tables 17 and 18 display the variables, the unstandardized regressions coefficients (B), the squared multiple correlations (R^2), F and p for each step in the hierarchical regression which produced a significant increase in prediction of administrative leadership of instruction. Table 17 indicates

that in schools with a group atmosphere (GA) score of greater than 65 the best power bases to predict increased levels of administrative leadership of instruction are the visionary, information, lack of coercion, and expertise bases. Table 18 indicates that in schools with a GA score of 65 or less levels of administrative leadership of instruction are best predicted by the levels of perceived use of the visionary and expert power bases as well as lack of use of the legitimate and coercive power by the principal. It should be noted that in schools with a more positive GA (>65), information power accounts for the largest single portion of variance (15%) of any of the power bases. Visionary power accounts for another 5%, followed by lack of use of coercion and use of expert with 2% each.

When the GA is less positive ($\leq$ 65), visionary power accounts for the largest single portion of variance (30%) followed by lack of use of legitimate (6%), use of expert (2%) and lack of use of coercive power (1%).

It is interesting that the provision of useful information is linked to perceptions of administrative leadership of instruction in schools with a more positive social climate but not in schools with a less positive social climate. It is also interesting that in less positive GA schools, perceptions that the principal is using visionary power is the strongest single predictor (30%) of perceptions of administrative leadership. In more positive GA schools, use of visionary power only contributes 5% to the prediction of administrative leadership of instruction.

Table 17

Predicting Administrative Leadership of Instruction in Schools with Good[a] Group Atmosphere (N=199)

Step	Variable entered	B	R^2	F	p
1	Information	1.22	.15	6.42	.0121
2	Visionary	1.67	.20	14.02	.0002
3	Coercion	- .98	.22	6.61	.0109
4	Expert	.82	.24	5.28	.0226

[a] Good GA = score > 65

Table 18

Predicting Administrative Leadership of Instruction in Schools with Poor[a] Group Atmosphere (N=231)

Step	Variable entered	B	R^2	F	p
1	Visionary	2.92	.30	58.88	.0001
2	Legitimate	-.88	.34	6.22	.0134
3	Expert	.93	.36	7.18	.0079
4	Coercive	-.71	.37	4.62	.0326

[a] Poor GA score < or= 65

Predicting positive and orderly environment. Tables 19 and 20 display the variables B, R^2, F and p for each step in the regression which produced a significant increase in the prediction of a positive and orderly environment. Table 19 indicates that in schools with a GA score greater than 65, a positive, orderly environment is best predicted by the principal's use of visionary power and non-use of legitimate power. It is interesting to note that in schools with a GA of 65 or less, a positive, orderly environment is best predicted by the principal's non-use of coercion (see Table 20). In both cases, however, the variance accounted for is small.

Table 19

Predicting positive and Orderly Environment in Schools with Good[a] Group Atmosphere (N=199)

Step	Variable entered	B	R^2	F	p
1	Visionary	.47	.03	7.93	.0053
2	Legitimate	-.30	.06	4.72	.0310

[a] Good GA score >65

Table 20

Predicting Positive and Orderly Environment in Schools with Poor[a] Group Atmosphere (N=231)

Step	Variable entered	B	R^2	F	p
1	Coercion	-.73	.10	26.49	.0001

[a] Poor GA score < or = 65

Predicting the use of assessment instruments. Only in schools with GA greater than 65 was there a significant R^2. As Table 21 shows, the use of assessment instruments in such schools is best predicted by the use of visionary and reward power and non-use of legitimate power by the principal. The variance accounted for is very small.

Table 21

Predicting Use of Assessment Instruments in Schools with Good[a] Group Atmosphere (N=199)

Step	Variable entered	B	R^2	F	p
1	Visionary	.66	.04	10.41	.0015
2	Legitimate	-.46	.06	6.98	.0089
3	Reward	.34	.08	3.97	.0478

[a] GA > 65

Predicting emphasis on achievement. Only in schools with GA less than or equal to 65 was there a significant R^2. As table 22 indicates, the emphasis on achievement in such schools is best predicted by the use of expert and visionary bases of power on the part of the principal. Once again, the variance accounted for by these power bases is very small.

Table 22

Predicting Emphasis on Achievement in Schools with Poor[a] Group Atmosphere N=231)

Step	Variable entered	B	R^2	F	p
1	Expertise	.28	.04	4.36	.0379
2	Visionary	.29	.05	4.10	.0441

[a] GA < or = 65

Predicting overall effectiveness. Tables 23 and 24 show those variables that best predict overall school effectiveness in school with more positive GA and those with less positive GA. In both conditions of GA, four factors are the best predictors of school effectiveness. In schools with GA of over 65, use of visionary power by the principal accounts for 12% of the variance in school effectiveness. Non use of coercion adds another 6% (R^2 = .18) and use of expertise adds another 1% (R^2 = .19) and non use of legitimate power (R^2 = .22) adds 3% significant increments to R^2.

Table 23

Predicting Overall Effectiveness in Schools with Good[a] Group Atmosphere (N=199)

Step	Variable entered	B	R^2	F	p
1	Visionary	3.35	.12	23.05	.0001
2	Coercion	-1.57	.18	6.37	.0124
3	Expertise	1.75	.19	9.75	.0021
4	Legitimate	-1.50	.22	6.26	.0132

[a] GA > 65

Table 24

Predicting Overall Effectiveness in Schools with Poor[a] Group Atmosphere (N=231)

Step	Variable entered	B	R^2	F	p
1	Visionary	3.88	.20	28.17	.0001
2	Legitimate	- 1.69	.27	6.15	.0139
3	Coercion	- 1.66	.25	6.89	.0093
4	Expertise	1.57	.28	5.51	.0198

[a] GA < or = 65

In schools with GA of 65 or less, use of visionary power by the principal accounts for 20% of the variance in school effectiveness. Lack of use of coercive power ($\underline{R}^2$ =.25) and legitimate power ($\underline{R}^2$=.27) also add significantly to $\underline{R}^2$. Finally, use of the expert power base ($\underline{R}^2$ =.28) by the principal, adds significantly to $\underline{R}^2$.

The best predictors of variables in the Schweitzer Questionnaire associated with school effectiveness, regardless of group atmosphere are; the possession and articulation of the purposes of the school by the principal (visionary power), the degree to which the principal has a reputation for superior knowledge or ability (expert power), the degree to which teachers do not believe that principals can penalize or make things difficult for those who do not cooperate, (coercive power), and the degree to which teachers do not believe that the principal has a right, considering their position to expect teachers to do what the principal wants (legitimate power).

The importance of the use of visionary power by principals can be pointed out by the percentage of variance ($\underline{R}^2$=.20) accounted for by this factor, especially in schools with a less positive social climate. The second major factor is lack of perceived coercion. This factor accounts for another 5 - 6% of the variance in total school effectiveness. In less positive GA schools, it appears that the clear articulation of goals but without any implications of coercion, as well as the possession by the principal of the reputation of an expert leads to perceptions by the staff that the school also possesses the characteristics of effective schools.

It seems, that schools with a less positive social climate may need a leader who they can believe in (expertise) and who clarifies what is to be done (visionary) but without coercion.

Additional Data

At the beginning of the instrument package distributed to participating teachers was a blank sheet of paper headed with the question; "what specific things does your principal do that encourages your willingness to cooperate with him/her?" The responses to that question are given in Table 25.

Examples of comments most frequently received were; "open to suggestions", "listens", "listens to your concerns", "he always takes time to listen to my story no matter how swamped with his own responsibilities".

Second most frequently received were comments like; "supportive of new and innovative ideas", "supportive regarding and during interviews", "he is sympathetic to personal difficulties and supportive of personal change", "supportive of personal change", "supports me".

Next in frequency came suggestions like; "asks for opinions re: new equipment, supplies", "my principal always makes himself available to me", "demonstrates that our opinions are valued", "open door policy to discuss concerns".

The fourth most frequent comment resembled; "provides positive feedback - verbal and written", "makes a point of praising effort", "gives praise for even small successes", "gives us a pat on the back when we do a good job".

Space does not permit quotations to support all the behaviours listed in Table 25. These behaviours were derived from the written comments received, however, and should be viewed as a categorization of actual comments rather than an artificially derived list.

Principals who were willing to listen, who were available and interested, and who followed an "open door" policy were cited most frequently as encouraging teacher cooperation. Second ranked in frequency of occurrence was support. This support could range from support for the teacher in matters of discipline or other problem situations with both students and parents to affirmation, encouragement and demonstrations of respect and confidence in the teacher's classroom ability. Teachers were encouraged to cooperate with principals; who were friendly, warm, sincere and caring; who had a sense of humor and a positive outlook; who treated staff with respect and fairness; and who were seen to have reasonable demands for which they gave the staff rational arguments. Teachers were encouraged to cooperate when principals recognized extra effort and praised a job well done. Principals who involved teachers in decision making, who set an example by their own hard work, who were knowledgeable about school matters and who encouraged professional growth and innovation also encouraged teacher cooperation. Teachers cooperated more with principals who were willing to take into account the "human element" and were concerned about teachers' out of school life as well. The principal who was competent, confident and able to state clear expectations as well as to give "straight" answers and prompt action was also seen to encourage teacher cooperation. Teachers also cooperated more if the principal kept in touch with the reality of

Table 25

Frequency Distribution of Behaviors Which Encourage Teachers to Cooperate with Principals (N=285)*

Behaviour	f
Listens, available, interested	74
Supportive	57
Open to suggestion, seeks opinion	40
Praises teacher for superior effort and work	40
Confidence in teacher's classroom ability	34
Friendly	29
Supports teacher in discipline and other problem matters with student and parent	28
Concerned about out of school life and the "human element"	27
Fair	25
Positive	25
Treats staff with respect, affirms, encourages	23
Sense of humor	23
Involves teachers in decision making	23
Hard worker	22
Knowledgeable about school matters	20
Encourages professional growth and innovation	19
Warm, sincere, caring	16
Reasonable, rational	16
Clear expectations, confident, competent	14
Straight answers, prompt action	13
Asks rather than orders	12
Keeps staff informed	12
Keeps in touch with classroom "reality"	10
	602 **

* Total is greater than 285 because each respondent listed more than one behavior.

** Only 285 teachers responded to this question.

the classroom such as through frequent, non-threatening visits, and if the principal kept the staff informed through bulletins and announcements.

Taken together, these responses indicate that teachers are encouraged to cooperate with principals who know their job, know where the school is going and have the skills needed to get the job done. In addition the principals must be supportive of their staff and be available to give that support.

Similar responses were reported in a study of California schools (California State Department of Education, 1977). In high achieving schools teachers rated principals as more helpful at supporting new ideas and projects, backing up teachers, enhancing parent-teacher relations, enforcing discipline, developing instructional leadership, and acquiring and distributing materials. The supportive behaviour of the principal was considered to be the major factor contributing to teacher job satisfaction and high student achievement in this study.

Indicators of quality schools were described by the Colorado State Department of Education (1982). Three indicators of effective principal leadership in such schools were: the principal's support and encouragement for cooperative teaching, new ideas, and creative teaching; the principal's accessibility and responsiveness to teachers; and the principal's willingness for open communication.

The findings of both the California study and the Colorado instrument contain elements of the supportive behavior of principals which are found in the results of the present study.

The responses given in Table 25 show similarities to the results of

a study of the job satisfaction of high school principals (Gunn and Holdaway, 1985). They found that the overall job satisfaction of senior high school principals was directly and substantially related to their perception of the schools' overall effectiveness, their overall effectiveness as a leader and their overall level of influence. The best predictor of the overall level of influence was the principal's personal qualities and characteristics. The results of the present study of elementary school principals and teachers as stated above would also indicate that the principals' personal qualities have a great deal to do with their ability to influence teachers.

In interviews, Gunn and Holdaway report that six principals viewed leadership "as working effectively with people, sharing responsibilities, drawing out the best in people, and establishing close relationships". Leadership was not perceived by any of the principals to be the "exercise of authority" or a strict superordinate-subordinate relationship. Their findings reflect the responses of teachers in the present study.

CHAPTER IV

Conclusions and Implications

The conclusions and implications of this study are presented in this chapter. Suggestions for further research are also given.

Conclusions

The following discussion presents the major conclusions of this analysis of the relationship between the perceived bases of a principal's power, selected indicators of effective schools, and the quality of school social climate. To research the problem, five hypotheses were developed and tested. The first four hypotheses were partially supported, and hypothesis five was fully supported.

This study is the only one, known to the researcher, to attempt to use the information power base as distinct from expert power as suggested by Raven (1971). The fact that information power correlates so much more strongly than expert power with the indicators of effective schools used in this study would seem to support its distinction from expert power. Therefore, this study does seem to provide some support for Raven's (1971) reformulation of bases of power.

This study introduces to the research literature, the visionary base of power. The fact that it is reasonably strongly correlated ($r=.75$) to administrative leadership of instruction gives some indication of how principals who provide a clear picture of the purposes and goals of their school are seen by their teachers. Berlew (1979), in a discussion of leadership in organizations, describes three leadership styles; custodial, managerial, and charismatic. Charismatic leadership is necessary for

satisfaction and excitement in the organization according to Berlew. He contends that charismatic leadership may in fact, reduce efficiency but it also will increase motivation and commitment, two much needed elements in modern organizations in Berlew's view.

Berlew defines charismatic leadership in terms of three types of leadership behaviour which "provide meaning to work and generate organizational excitement" (p. 347). These are:

1. The development of a "common vision" for the organization related to values shared by the organization's members,
2. the discovery or creation of value-related opportunities and activities within the framework of the mission and goals of the organization, and
3. making organization members feel stronger and more in control of their own destinies, both individually and collectively.

Visionary power, as defined in this study, seems closely related to the charismatic leadership dimension described by Berlew.

This study found a definite relationship between the teachers' perceptions of the power bases used by the principal and their perceptions of indicators of school effectiveness. Visionary power was particularly related to administrative leadership of instruction and the use of assessment instruments. To a lesser extent it was also related to achievement emphasis. The perceived use of information power was particularly related to administrative leadership and to a lesser extent, to use of assessment instruments. The perceived use of expert power was somewhat related to administrative leadership of instruction. The use of

referent power was moderately related to administrative leadership of instruction and to a positive, orderly school environment. The other relationships present were of a modest magnitude.

This study found that in schools with a less positive school social climate, the relationships between bases of a principal's power and indicators of school effectiveness were stronger than in schools with a more-positive school social climate. Although the amount of variance accounted for is modest, the finding is interesting. Perhaps, it is those schools which have a poor social climate which require a non-threatening, but charismatic principal in order to become more effective.

Implications

Those involved in the training of elementary school principals may be interested in the results of this study. It would seem that principals need to develop a clear personal philosophy of what teaching and learning in schools is all about and be prepared to modify that philosophy to the particular needs of their students in order to clearly articulate a "vision" for their school. Such a clear vision, coupled with a supportive, non-coercive attitude seem particularly important in schools with a poor social climate.

Principals also appear to need to use power bases most acceptable to teachers. For principals to rely on their legitimate power or power inherent in their office without involving staff in participatory decision-making would seem folly.

Teachers perceive principals who are able to supply useful information with indicators of effective schools than they do principals who simply

rely on the reputation for expertise without actually "walking the talk". Principals should be true instructional leaders, being able to lead and support teachers in all aspects of school curricula.

Further Research

The Schweitzer Questionnaire needs to be related to measures of student achievement in Canada. Although the characteristics of effectiveness used in the instrument were related to achievement in the United States, it remains to be determined which characteristics are related to student achievement in Canadian schools, and to what extent they are related.

There is a need to examine the variables used in this study by means of multivariate analysis in order to get a better understanding of the interplay among the variables.

In order to better understand what principals do, who are perceived as using a particular power base, studies on principal behaviour need to be conducted. Interviews with teachers and principals as well as direct observations seem appropriate for this.

It would seem that schools cannot effectively be "carbon copies" of one another. The particular vision which will create an effective school seems unique to each school. More studies to investigate this idea seem necessary.

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Appendix I

Instruments

THE GROUP ATMOSPHERE QUESTIONNAIRE

Please describe the group atmosphere of your present school by checking the following items:

1.	Friendly	: 8 : 7 : 6 : 5 : 4 : 3 : 2 : 1 :	Unfriendly
2.	Accepting	: : : : : : : : :	Rejecting
3.	Satisfying	: : : : : : : : :	Frustrating
4.	Enthusiastic	: : : : : : : : :	Unenthusiastic
5.	Productive	: : : : : : : : :	Nonproductive
6.	Warm	: : : : : : : : :	Cold
7.	Cooperative	: : : : : : : : :	Uncooperative
8.	Interesting	: : : : : : : : :	Boring
9.	Supportive	: : : : : : : : :	Hostile
10.	Successful	: : : : : : : : :	Unsuccessful

Bases of Power Questionnaire

Read each of the following descriptions of the bases of power carefully.

Reward power is the ability of the principal to gain a teacher's compliance based on the teacher's belief that the principal can give special help and benefits to those who cooperate with him/her.

Coercive power is the ability of the principal to gain a teacher's compliance based on the teacher's belief that the principal can penalize or make things difficult for those who do not cooperate with him/her.

Expert power is the ability of the principal to gain a teacher's compliance based on the principal's reputation for superior knowledge or ability.

Information power is the ability of the principal to gain a teacher's compliance based on the principal's ability to actually provide useful information.

Referent power is the ability of the principal to gain a teacher's compliance based on the teacher's admiration of his/her personal qualities and the teacher's desire to act in a way that merits his/her respect and admiration.

Legitimate power is the ability of the principal to gain a teacher's compliance based on the teacher's belief that the principal has a right, considering his/her position, to expect teachers to do what (s)he wants.

Visionary power is the ability of the principal to gain a teacher's compliance based on the teacher's belief that the principal has a definite vision of the purposes (goals) of the school and clearly articulates those purposes (goals).

Please respond to each of the following statements by checking your reaction on the scale provided.

1. My principal employs legitimate power.

agree ___7___ ___6___ ___5___ ___4___ ___3___ ___2___ ___1___ disagree

2. My principal employs visionary power.

false ___1___ ___2___ ___3___ ___4___ ___5___ ___6___ ___7___ true

3. My principal employs reward power.
incorrect 1 2 3 4 5 6 7 correct

4. My principal employs expert power.
wrong 1 2 3 4 5 6 7 right

5. My principal employs referent power.
yes 7 6 5 4 3 2 1 no

6. My principal employs coercive power.
agree 7 6 5 4 3 2 1 disagree

7. My principal employs information power.
false 1 2 3 4 5 6 7 true

8. My principal employs visionary power.
yes 7 6 5 4 3 2 1 no

9. My principal employs expert power.
incorrect 1 2 3 4 5 6 7 correct

10. My principal employs coercive power.
wrong 1 2 3 4 5 6 7 right

11. My principal employs legitimate power.
wrong 1 2 3 4 5 6 7 right

12. My principal employs reward power.
false 1 2 3 4 5 6 7 true

13. My principal employs referent power.
agree 7 6 5 4 3 2 1 disagree

14. My principal employs information power.
yes 7 6 5 4 3 2 1 no

15. My principal employs reward power.
yes 7 6 5 4 3 2 1 no

16. My principal employs legitimate power.
incorrect 1 2 3 4 5 6 7 correct

17. My principal employs coercive power.
incorrect 1 2 3 4 5 6 7 correct

18. My principal employs expert power.
false 1 2 3 4 5 6 7 true

19. My principal employs visionary power.
agree 7 6 5 4 3 2 1 disagree

20. My principal employs information power.
agree 7 6 5 4 3 2 1 disagree

21. My principal employs referent power.
wrong 1 2 3 4 5 6 7 right

22. My principal employs expert power.
agree 7 6 5 4 3 2 1 disagree

23. My principal employs information power.
wrong 1 2 3 4 5 6 7 right

24. My principal employs reward power.
agree 7 6 5 4 3 2 1 disagree

25. My principal employs coercive power.
false 1 2 3 4 5 6 7 true

26. My principal employs visionary power.
wrong 1 2 3 4 5 6 7 right

27. My principal employs referent power.
false 1 2 3 4 5 6 7 true

28. My principal employs legitimate power.
yes 7 6 5 4 3 2 1 no

29. My principal employs referent power.
incorrect 1 2 3 4 5 6 7 correct

30. My principal employs coercive power.
yes 7 6 5 4 3 2 1 no

31. My principal employs information power.

incorrect 1 2 3 4 5 6 7 correct

32. My principal employs legitimate power.

false 1 2 3 4 5 6 7 true

33. My principal employs visionary power.

incorrect 1 2 3 4 5 6 7 correct

34. My principal employs reward power.

wrong 1 2 3 4 5 6 7 right

35. My principal employs expert power.

yes 7 6 5 4 3 2 1 no

What specific things does your principal do that encourages your willingness to cooperate with him/her?

SCHWEITZER QUESTIONNAIRE

Administrative Leadership

	strongly agree	agree	uncertain	disagree	strongly disagree
1. There is clear, strong centralized instructional leadership from the principal in your school.	—	—	—	—	—
2. The principal frequently communicates to individual teachers their responsiblity in relation to student achievement.	—	—	—	—	—
3. Supervision is directed at instruction.	—	—	—	—	—
4. Teachers in your school turn to the principal with instructional concerns or problems.	—	—	—	—	—
5. The principal is an important instructional resource person in your school.	—	—	—	—	—
6. Discussions with the principal often result in some aspect of improved instructional practice.	—	—	—	—	—
7. The principal discusses lesson plans with teachers in relation to instruction.	—	—	—	—	—
8. The principal regularly brings instructional issues to the faculty for discussion.	—	—	—	—	—
9. The principal leads frequent formal discussions concerning instruction and student achievement.	—	—	—	—	—
10. The principal is accessible to discuss matters dealing with instruction.	—	—	—	—	—
11. *Instructional issues are seldom the focus of faculty meetings.	—	—	—	—	—
12. The principal makes frequent formal class observations.	—	—	—	—	—

	strongly disagree	disagree	uncertain	agree	strongly agree
13. The principal reviews and interprets test results with and for the faculty.	—	—	—	—	—
14. The principal puts much emphasis on the meaning and use of standardized test results.	—	—	—	—	—
15. The principal is very active in securing resources, arranging opportunities and promoting staff development activities for faculty.	—	—	—	—	—
16. *In your school teachers are more likely to receive approval from the principal for being good disciplinarians than they are for being good instructors.	—	—	—	—	—
17. *You are not likely to be considered a good teacher in your building if you don't get your paper work in on time.	—	—	—	—	—
18. *The principal praises teachers who don't send many students to his/her office.	—	—	—	—	—

Positive and Orderly Environment

	strongly disagree	disagree	uncertain	agree	strongly agree
1. School staff assume responsibility for discipline in this school.	—	—	—	—	—
2. Student behavior is generally positive in your school.	—	—	—	—	—
3. Students in your school abide by school rules.	—	—	—	—	—

	strongly agree	agree	uncertain	disagree	strongly disagree
4. Discipline is not an issue in your school.					
5. The physical condition of your school is generally pleasant and well kept.					
6. The school building is neat, bright, clean, and comfortable.					
7. A positive feeling permeates the school.					
8. Class atmosphere in your school is generally very conducive to learning for all students.					

Use of Assessment Instruments

	strongly agree	agree	uncertain	disagree	strongly disagree
1. Student assessment information (criterion-referenced tests, skills checklists, etc.) is regularly used to give specific student feedback and plan appropriate instruction.					
2. The principal uses test results to recommend modifications or changes in the instructional program.					
3. Teachers and the principal thoroughly review and analyze test results to plan instructional program modifications.					
4. Multiple assessment methods are used to assess student progress in basic skills (eg. criterion-referenced tests, work samples, mastery checklists, etc.).					

	strongly agree	agree	uncertain	disagree	strongly disagree
5. Criterion-referenced tests are used to assess basic skills throughout the school.	___	___	___	___	___
6. The standardized testing program is an accurate and valid measure of the basic skills curriculum in your school.	___	___	___	___	___
7. *Standardized test results are not available or are not used to evaluate program objectives.	___	___	___	___	___
8. In your school there is annual standardized testing at each grade level.	___	___	___	___	___

Expectations

1. How many teachers in your school believe that all their students have the ability to master grade level academic objectives?	most	many	half	some	few
2. What percent of the students in your school do the teachers generally believe are able to master grade level academic objectives?	>80	60-80	40-60	20-40	< 20
3. What percent of the students in your school do you feel are capable of mastering grade level academic objectives?	>80	60-80	40-60	20-40	< 20
4. What percent of the students in your school do you expect to complete high school?	>80	60-80	40-60	20-40	< 20

5. On average, how well do you expect the students in your school to perform?	very well	well	average	less than average	poorly
6. How would you rate the academic ability of students in your school compared to other schools?	much more able	more able	about the same	less able	much less able
7. *Teachers feel that nothing they do makes any difference with regard to achievement in your school.	strongly agree	agree	uncertain	disagree	strongly disagree

Emphasis on Achievement

	strongly agree	agree	uncertain	disagree	strongly disagree
1. All staff in your school clearly understand their responsibility for basic skill achievement.	—	—	—	—	—
2. The students in your school are told what objectives they are expected to learn.	—	—	—	—	—
3. Your school has a strong feeling of "Let's get things done", especially basic skills.	—	—	—	—	—
4. Teachers in your building will do anything necessary to get all students to read and do math well.	—	—	—	—	—
5. The priority of basic skills achievement in your school has increased over the last few years.	—	—	—	—	—
6. *All the teachers in your building care about is "getting by" and picking up their cheques.	—	—	—	—	—

Appendix II

Correspondence

David C. Cross
9 Ridgevalley Drive
Nepean, Ontario
K2B 6L2

December 20, 1984

Dear

I am a former elementary school principal who is presently working on my Ph.D. at the University of Ottawa. I am requesting your permission and aid in collecting data from some of your elementary schools.

My topic is "The Relationship Between Bases of Power and Elementary School Effectiveness". Basically, my study is a correlation of French and Raven's bases of power with a measure of school effectiveness based on five characteristics of effective schools frequently mentioned in the literature.

In brief, my study involves the correlation of the elementary school principal's base of power as perceived by his staff with the measures of school effectiveness. This relationship should be further mediated by the quality of the relationship between the principal and his staff (group atmosphere).

Previous reserach has supported this line of reasoning. However, little research has been done in Canada using the school effectiveness criteria presented in this study. In addition, the bases of power originally proposed by French and Raven have been expanded in this study.

This research could shed light on those factors of leadership which are associated with instructionally effective schools.

Enclosed are copies of the instruments that will be used in my study. The school principal would complete the Group Atmosphere scale. Half the staff in a school would complete the Schweitzer Questionnaire; the other half the Bases of Power Questionnaire and the Group Atmosphere scale. The Group Atmosphere scale requires about five minutes, the Bases of Power Questionnaire about ten minutes, and the Schweitzer Questionnaire about twenty minutes to complete. I am aware of the sensitivity of some of the data and will hold all data in the strictest confidence. The study will involve schools throughout Ontario and all data will be pooled so that no comparisons between individual principals, schools or boards will be performed.

In conclusion, I am requesting two things; your permission to collect data from cooperating schools in your jurisdication, and a list of elementary schools and their principals which would be willing to cooperate in this research. The data would be collected in February and March and a report of the results of the study would be sent to all schools who requested it.

Your prompt consideration of this request would be appreciated.

Yours truly,

David C. Cross

P.S. I wish to study only those principals who have been a principal in that school for at least two years.

9 Ridgevalley Drive
NEPEAN, Ontario
K2B 6L2

Dear

I am an elementary school principal presently working on my Ph.D. at the University of Ottawa. I am requesting your help in collecting data. This help would consist of two things:

1. select a staff member to distribute and collect the staff questionnaires;
2. complete the Group Atmosphere scale and return it in the envelope provided to the selected staff member so it may be returned to me with the others.

The selected staff member will be asked to randomly select ten staff members to complete a set of three instruments: (1) the GA scale you completed; (2) a measure of what power base most influences them to comply with your wishes; (3) and a measure of your school's effectiveness in academic achievement. The time required to complete all three would be 20--30 minutes.

This study is attempting to identify the power base and specific behaviors of principals who administer instructionally effective schools. As a fellow principal, I am very aware of the pressures on your valuable time. I am, however, also aware of the need to increase our knowledge of how best to use our time and energies. It is my hope that this study will contribute to that knowledge.

Although all data from the 100 participating Ontario schools will be pooled in order to guarantee anonymity, I will gladly send you a copy of the final results if you wish. This is undoubtedly a promise you have heard before. I can only quote a Regina school principal who cooperated on my master's research. He said

> "Of all the studies that I have participated in, everyone promised that results to participants would be forthcoming. You are the only one who kept his word."

Since your school has been randomly selected, it is critical to my study that both you and your staff complete and return your questionnaires as soon as possible. An indication of your support for this study to your staff would be greatly appreciated.

Your Director of Education is aware of this request and has given his permission for me to contact you.

Thank you for your anticipated cooperation!

Yours truly,

David C. Cross

David C. Cross

.....

Tear off and return with questionnaire if you wish a copy of the study's results.

Name
Address
Postal Code

Principal Data Form

About you:

Total years of teaching experience _____

Years as principal of this school _____

Sex _____

Highest degree earned _____

Number of schools you have administered as principal _____

Briefly outline your involvement in instructional or curriculum matters outside your school (eg. curriculum committees, subject councils, etc.)

_____

_____

_____

_____

_____

About your school:

Enrolment _____

Estimate what percent of your parents would fall into category A, B and C.

A ____%	B ____%	C ____%
Professionals (Doctors, lawyers, teachers, engineers, accountants, managers, librarians, social workers, etc.)	(Bookkeepers, travellers, firemen, police, nurses, realestate, secretaries, mailmen, etc.)	(Bus drivers, construction workers, mechanic, machine operator, farmer, cook, caretaker, etc.)

Dear Colleague,

Thank you for helping with the data collection for my study. Enclosed find ten questionnaire kits. Each kit consists of a letter to the teacher, three different questionnaires and an envelope to enclose them. Please select ten staff members at random (you may include yourself) and ask them to complete the three questionnaires (about 1/2 hour) and return them to you, sealed. If after one week there are some not yet returned, please ask them once more. After two weeks please return to me all completed questionnaires, including the principal's envelope, in the stamped, addressed envelope provided.

Since I must have at least five of the ten returned, if after two weeks there are fewer than five returned, please use your powers of persuasion.

Your conscientious effort is critical to this study. Thank you for your cooperation!

Yours truly,

David C. Cross

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Tear off and return with the questionnaires if you wish a copy of the study's results.

Name
Address
Postal Code

Dear Colleague,

I am an elementary school principal presently working on my Ph.D. at the University of Ottawa. I am requesting your help in collecting data. This help consists of completing the three enclosed questionnaires. One measures the atmosphere of your school (one minute), another measures your perception of why you comply with your principal's requests (five minutes); the third measures the level of instructional effectiveness of your school (ten minutes). When completed, return them (in the envelope provided) to the staff member who gave them to you. That person will mail the responses to me. All data from the 100 participating schools will be pooled, so you can be assured of anonymity.

Your Director of Education and your principal have agreed to cooperate in this study. Your prompt completion and return of the questionnaires is, however, the most critical part of the study. It is hoped that behaviors associated with instructionally effective schools will be identified by this study. If you want a copy of the results please indicate below.

As one of a select few who have been randomly chosen to participate in this study, your responses are extremely important. Please complete and return the questionnaires as soon as possible to the staff members who gave them to you.

Thank you for your anticipated cooperation!

Yours truly,

David C. Cross

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Tear off and return with questionnaire if you wish a copy of the study's results.

Name
Address
Postal Code