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Principals in Saskatchewan Rural Schools: Their Leadership Behaviors and School Effectiveness

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PRINCIPALS IN SASKATCHEWAN RURAL SCHOOLS: THEIR LEADERSHIP BEHAVIORS AND SCHOOL EFFECTIVENESS

by

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ABSTRACT

Recognizing the important role of the principal in Saskatchewan Rural school effectiveness, the study addressed the following four questions:

1. Are there significant differences in the behaviours of principals in schools that have been identified as effective compared to those principals in schools that have been identified as noneffective?

2. Are the leadership behaviours as identified by the Leadership Practices Inventory Self and Other (LPI-self and LPI-other) found in a set of Saskatchewan schools?

3. Are there differences in the principals' perceptions of their leadership behaviours as identified by the LPI-self and those perceptions of other staff members as indicated on the LPI-other?

4. Are there significant differences between the leadership behaviours of principals as identified by the LPI-self and the LPI-other in the various schools within the province of Saskatchewan, based on grade organization and location?

Saskatchewan schools were divided into rural and urban schools and 130 sample schools were chosen to

represent the five different grade structures common to Saskatchewan. Principals' and teachers' perceptions of the effectiveness of the school and the leadership behaviours of the principal were determined using the San Diego County Office of Education Effective Schools Survey and the LPI-self and the LPI-other. All statistical analysis was done through the use of the SPSS, Inc. (1986) statistical analysis program.

The data suggested that:

1. There is a significant difference in the behaviours of principals in schools that are identified as effective compared to those behaviours of principals in schools that have not been identified as effective.

2. The behaviours identified by Kouzes and Posner and tested by the LPI-self and LPI-other were found in the various schools in Saskatchewan.

3. There are differences in the principals' perceptions of their leadership behaviours and those perceptions of other staff members.

4. There were no significant differences found in the leadership behaviours of principals within the various school structures except between the urban elementary and high schools, where there was a significant difference found in the one variable inspiring the vision, and also in the mean of the five behaviours measured.

The data also revealed that almost 50% of the differences between effective and noneffective schools can

be explained by the differences in the leadership behaviours of inspiring a shared vision and enabling others to act.

This study is dedicated to the people who have sacrificed so much in order that I might achieve my personal goal. To my parents, to my children, Tracey and Scott, and most of all to Joy, I dedicate this study to you with all my love and gratitude.

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STATEMENT OF THE ISSUE

Introduction

The concepts of school improvement and school effectiveness are not new. The history of education documents numerous attempts to improve education. From the time public schools were first established, they have been challenged about their practices, content, and ideas.

The education system has seen many reform movements, and a variety of philosophies have been advocated. Curricula have been continuously revised to keep pace with the increasing amount of information that is available. The responsibilities of the school have expanded. New courses have been developed. New materials and practices have been implemented.

The major push for change has come from outside the school and the school system has constantly been compared to the business community. Many of the proposed variations have been mandated, legislated, or imposed upon the school in some fashion. In other words, educators

have been told what to do. Expectations have been stated, often without the resources or support necessary to alter practices. Some innovations have impacted the system and some have simply been passing fads.

Schools are once again being challenged. The major difference this time is that more is known about what makes schools effective and how schools actually change.

The concept of school effectiveness has expanded. It still involves putting new programs and practices into place, but now it includes guidelines for where and how changes in the schools should take place. The concept of effective schools and school improvement is related to people and relationships, attitudes and commitment, communication and support. It has implications for procedures, decision-making, planning and leadership.

Transporting any new program or practice into a school does not constitute change and improvement in education, and mandating change does not necessarily result in better educational practices. The change process takes time and involves many people, and the school is the point at which most effective and long-lasting change takes place.

The concept of school effectiveness is based on a different orientation of change. While impetus for the improvement can come from outside the school, planning and

action must occur within the school. This concept of school effectiveness and improvement is based on the assumption that people in schools have the skills to improve education and to solve their own problems.

Research into effective schools and the school improvement process has shown that the principal is an important player. Without the principal's active support and endorsement, implementation of any school improvement project is difficult. Principals provide the leadership in initiating and supporting change (Cohen, 1981; Edmonds, 1979; Hawley, Rosenholtz, Goodstein, & Hasselbring, 1984).

Research in the business community has established the importance of leadership in effective organizations (Kouzes & Posner, 1987; Peters & Waterman, 1982). This research has also established behaviours that are congruent to leaders in effective organizations. Research has established that principals do exhibit similar behaviors within effective schools (Hostetler, 1984). Research has done little to distinguish between the behaviors of principals in schools that are structured differently along grade lines (Lortie, 1975; Meyers, 1987). There has been little research that describes the leadership behaviors of rural principals (Meyers, 1987; Nachtigal, 1982; Smith, 1981).

In studies on rural education (Berger, 1984; McLaughlin, 1982; Smith, 1981) researchers discussed leadership as a reflection of the rural community while others (Meyers, 1987) viewed rural school leadership from a deficit perspective. Since there has been no clear picture of leadership in rural schools, rural school principals and rural school effectiveness have been treated as extensions of the urban school effectiveness research; even though the role played by principals is just as relevant in rural schools as it is in an urban setting (Jacobson, 1986).

Description of the Study

The purpose of this study is to compare the behaviors of rural school principals as perceived by themselves and as perceived by their fellow workers. This study will also examine principals' behaviors and their relationship to the effectiveness of the individual schools involved in the study. This study also proposes looking at the behaviors of rural school principals to see if they are congruent within the various school structures: elementary, high school, or kindergarten to grade twelve; and to see if the behaviors are congruent with those exhibited by urban principals who operate in elementary and high school structures.

Rationale

"Saskatchewan, to a far greater degree than either of her sister provinces, is still a rural society" (Archer, 1980, p. 349). The last two decades have seen great technological advances and economic diversification; however, the economy and perhaps more importantly, the society has maintained its agricultural and rural base.

Saskatchewan has not been spared the effects of rapid changes over the past two decades. As of 1986, 38.57% of the population resided in rural Saskatchewan, a direct result of the rural urban shift which saw 62% of the population in rural areas in 1966. With this drop in rural population there has been a steady rise in the average size of farms from 807 acres in 1966 to 1036 acres in 1984, with a corresponding decrease in the number of farms of over 1000 acres. (Statistics Canada 1989)

Saskatchewan schools exist in this changing context while the total school enrollment in the provinces has remained constant at approximately 200,000 pupils. Since the early 1980s, the rural/urban shift is evident but not to such a great extent. The urban enrollment in 1981 was 48.7% of the total pupils enrolled in the province while in 1987 it had climbed to 50.6%. The decline in rural school population has been most significant in grades 10 to 12. As of 1984, 25% of the schools offering classes at

these levels had fewer than ten students per grade. (Saskatchewan Education, 1987)

Saskatchewan which has traditionally had a strong educational program financed by government grants and local taxation has two main systems of schools, public and separate. The public system is that system that was established first within a district while the separate system is the second system in the district; usually this is a Catholic system. Both systems are funded through a tax base and government grant formula. There are also a few private schools within the province which are not supported through taxation or grants from the government. Rural and urban schools be they public or separate schools are very much alike in the way they are organized to provide grade 1 to grade 6 programs. A notable difference is that the rural schools, because of their small size, more frequently have multi-grade classes. Evidence that other differences are minimal was provided by the Minister's Advisory Committee on the Fine Arts in Education (1978-79). This survey indicated that there were few instructional differences between rural and urban schools within the province.

The Division III (grades 7 to 9) program in the rural areas is often offered within a school organization which provides Division I to IV (grades 1 to 12). With that

organization, specialized high school teachers and facilities may be utilized to offer specialized courses to the students. Where such an arrangement does not exist, provision is sometimes made to transport the Division III students to other schools for certain courses which require specialized teachers and facilities.

The ability to provide a quality educational program regardless of location is but one example of the ingenuity and dedication to excellence which is a characteristic of education in rural Saskatchewan. The provision of the rural program is characterized by lower pupil-teacher ratios, but more multi-graded classes; by sharing resources; by using general and special purpose transportation; and in many cases by including all twelve grades in one building.

For grades 10 to 12, the situation is somewhat different. On a provincial level, attempts are made to meet individual student needs through an emphasis on providing a wide range of courses from which the students may choose. The fact that small schools do not offer a wide range of elective courses has been substantiated and it is also true that rural schools offer somewhat fewer courses than urban schools of comparable size. (Rural Education: Options for the 80's A discussion paper prepared by Saskatchewan Education, February, 1981, p. 9)

In considering the present successes and difficulties of rural education in Saskatchewan, it is important to consider the concept of equality of educational opportunities and how these opportunities can be enhanced in a school setting. Historically Saskatchewan students have had universal access to education. However, there is little evidence that exists that policies and programs have been established to overcome inequalities of opportunity caused by social forces external to the school or even school location. The concept of equality can be used to consider how the objectives for rural education in Saskatchewan are being met. Equality of opportunity in an individual school relates to the effectiveness of the school itself in allowing the students to show overall achievement in all educational parameters (for example, academic, social, physical and emotional) regardless of the school's size and location.

In the recent past reports and research on school effectiveness have suggested rather strongly that there can not be an effective school without the strong leadership of a principal (Purkey & Smith, 1983). Louis and Miles (1990) in their study of five urban high schools found that there were many similarities within effective schools. They discovered that in order for a school to be

effective there had to be strong leadership, a clear school focus and empowered teachers who work toward improved instruction. The problem that has arisen from these studies revolves around the concept of leadership. These studies have developed a concept of instructional leadership. There has been a great deal of confusion about what leadership is and how leadership operates within a school.

Studies have examined instructional leadership behaviour in effective schools (Chrispeels & Meaney, 1985; Smith & Andrews, 1989). They have also examined leadership behaviors in organizations (Kouzes & Posner, 1987; Peters & Waterman, 1982); however, there appears to be a void in the literature and research with regard to the leadership behaviors of rural school principals and how they may differ between school structures and how they may differ from urban school principals.

Scope of the Study

This study was limited to school principals and their schools in the province of Saskatchewan, Canada during the 1988-89 academic year. The study primarily looked at rural school principals in three types of schools: elementary, high, and kindergarten to grade twelve (K-12).

In the comparison aspect of the study the behaviors

of principals in two types of Saskatchewan urban schools (elementary and high schools) were examined and compared to those in similar rural schools. There are no K-12 schools in urban Saskatchewan.

Significance of the Study

Results of this study will contribute to the literature which is lacking in the area of rural school leadership, and the role of the behaviors of the principals in the effectiveness of rural education. It is further hoped that by identifying the leadership behaviors that are not presently being displayed, educational programs can be designed that focus on the total aspect of leadership and emphasize the missing attributes. This study will also provide a foundation for future studies of educational leadership in the rural setting.

Limitations

1. The Leadership Practices Inventory (LPI) survey has been used outside of the school setting both in private and public organizations; therefore, certain findings may be skewed by the very nature of a school and its operations.

2. The findings depend upon the perceptions of individuals and the accuracy of these perceptions may vary

according to the respondents.

Delimitations

This study was delimited to the province of Saskatchewan and the principals and teachers that responded to the questionnaires. The study was further delimited to principals who were not in their first year in the schools studied and to teachers who had worked with the principals for more that one year. Specifically, perceptions were solicited from school principals and teachers during the 1988-89 academic year.

The study was delimited to those aspects of school effectiveness and those leadership behaviors which were identified in the literature and generated from previous research.

This study was directed at the behaviors of school principals and is not intended to be generalizable to other personnel in the school systems.

Replication of this study to other settings may be limited by the nature of Saskatchewan and the structure of its school system. Generalizability of the study to a large population will be limited because the target population was predominately non-minority, English speaking, and rural. The culture and values of the province may differ from those of other provinces, states

and countries.

Assumptions

The following assumptions were made in the project:

1. Documentation used to separate the schools into the respective subgroups was complete and accurate.

2. Participants did in fact complete the inventories completely and accurately and returned them to the researcher.

3. The inventories do distinguish leadership behaviors.

4. The Effective Schools Survey does distinguish effective schools.

Definition of Terms

A definition of terms will clarify meaning of key concepts that will be used in this study, thus avoiding ambiguity or misinterpretation. These definitions are a composite of many definitions which have been studied and rewritten in order to provide working definitions for this study.

Leadership: Is an influential relationship between persons, leaders and followers, which produces real, intended change and fulfills the mutually held goals and purposes of both the leaders and followers.

Leadership Behaviors: Are those acts, practices or activities demonstrated by leaders in the exercise of leadership.

Effective Schools: Are those schools that show overall achievement (academic, social, physical and emotional, etc.) of students and the distribution of achievement reflects the effectiveness for all students. These schools are characterized by the following variables: instructional leadership; safe and orderly environment; opportunity to learn; clear school mission; frequent monitoring; high expectations; home-school relations (the extent to which school staff and parents work together to promote student learning).

Rural Schools: Are those schools that are not found in one of the twelve Saskatchewan cities.

Rural Elementary Schools: Are those schools that do not have any grade nine to twelve classes.

Rural High Schools: Are those schools that do not have any kindergarten to grade five classes but do have grades nine to twelve.

Rural K-12 Schools: Are those schools that have classes from kindergarten to grade twelve.

Urban Schools: Are those schools that are found in one of the twelve Saskatchewan cities.

Urban Elementary Schools: Are those schools that do

not have any grade nine to twelve classes.

Urban High Schools: Schools that do not have any kindergarten to grade five classes but do have grades nine to twelve.

Summary

This chapter introduced the concepts of school effectiveness and leadership behaviors and describes the setting of the study as one which reflected a need for research in the previous mentioned areas. Recent and associated research into the areas of school effectiveness and leadership behaviors in the business community was also cited.

The purpose of the investigation was stated as encompassing an assessment of school effectiveness as perceived by staff members together with a comparison of the perceptions of principal's leadership behaviors as perceived by the principals themselves and by members of their teaching staffs.

Significant claims for the study were cited as providing: a basis to help fill a void in the relevant literature; an identification of behaviors that are being displayed and those that are absent; and, a basis for future studies of educational leadership in the rural educational setting.

Finally, limitations, delimitations, assumptions and definitions were given. The terms defined were; leadership, leadership behaviors, effective schools, rural schools--elementary, high, and K-12, and urban schools--elementary and high.

Chapter 2

REVIEW OF LITERATURE

The review of the literature is divided into four major areas. The first section will review the basic theory of effective schools. The second will examine leadership and behaviors of leaders. The third section of the review will discuss the importance of the principal and their behaviors. In the fourth section the role of leadership in effective schools will be examined.

Effective Schools

The effective schools research grew out of a challenge to Coleman et al.'s (1966) assumption that family background is the primary determinant of how well children do in school or the corollary assumption that schools have little impact on students' achievement.

The effective schools researchers Brookover, Beady, Flood, Schweetzer and Wisenbaker (1977), Brookover and Lezotte (1979), Edmonds (1979), Rutter, Maughan, Mortimore, Ouston and Smith (1979) have concluded that if school resources are effectively used then every child can

master the basic skills and that schools can be successful in teaching all children. These conclusions were based on the identification of schools that were successful at teaching all students those skills needed to succeed in the following grade.

Several effective school researchers have studied these schools to identify common elements which exist and which distinguish them from less effective schools. Weber (1971) found four significant factors common to successful schools: leadership, high expectations, orderly climate and stress on reading.

Shoemaker and Fraser (1981) in a discussion of the New York Study (1978), the Maryland Study (1978) and Venesky's (1980) Study in Delaware revealed several factors such as: a positive principal/teacher interaction; and instructional leadership role by the principal; an assertive rather than passive principal's role, and a leadership orientated towards staff and student achievement.

In Fifteen Thousand Hours: Secondary Schools and Their Effects on Children, Rutter et al. (1979) discussed the effects of different schools on children and concluded that the following factors were found in effective schools: students actively engaged in learning activities; praise freely given and discipline firm but infrequently

applied; a general attitude and expectation for academic success; students responsible for personal and school duties and resources; immediate feedback on acceptable performance; staff consensus on school values and aims; clear guidelines and principles for student behaviour; an environment that was clean and comfortable; a concern for individual and group student welfare by staff members; and treatment of students in ways that emphasize their success and potential for success.

Purkey and Smith (1983) in their comprehensive review of the effective school literature summarized the characteristics that have been identified in various studies. They discovered that the variability of the characteristics stemmed from the research design or the way in which the characteristics were subdivided or grouped rather than from any real conflicts in the research findings. Based on this review and others Chrispeels and Meaney (1985) found three important facts that stood out:

1. School effectiveness encompasses the total school organization and culture as well as classroom management and teaching.

2. The characteristics can be defined and assessed individually, but the research indicates that all must be in place, at least to some degree, to maximize a school's

effectiveness.

3. The interaction of the characteristics in a school results in an impact that is greater than if the characteristics were applied individually (p. 5).

Chubb (1987) stated that from his research the organization and the structure together constituted an overarching system of behaviour in which everything is related to everything else. These factors determine the school's educational effectiveness. Chubb found that private schools were more effective than public schools since they "tended to develop team like organizations that exercise greater control over the schools, public schools are captives of democratic policies" (1987, p.1). These findings were consistent with those found by Coleman and associates (Coleman, Hoffer & Kilgore, 1982; Hoffer, Greenly & Coleman, 1985).

The following factors were found by Chubb to affect school performance: external authorities; principals; school staffing; goals and policies; and teachers and teaching.

While there is no total agreement on what an effective school is, there is a general agreement that effectiveness relates to student outcomes. Test scores have been one measurement of this effectiveness yet as Larry Cuban (1984) said,

> the concept of effectiveness is too narrow. Tied narrowly to test scores in lower-order math and reading skills , school effectiveness research and programs ignore many skills, habits, and attitudes beyond the reach of paper-and-pencil tests. (p. 996)

Researchers are continually trying to identify effective schools and through countless studies the following seven characteristics have arisen to typify the procedures, activities and practices in effective schools. These characteristics form the basis of the Hartford, Connecticut, Glendale, Arizona, and San Diego, California Effective Schools Assessment Instruments. The seven characteristics are as follows:

1. Clear School Mission
2. Safe and Orderly Environment
3. Opportunity to Learn
4. High Expectations
5. Frequent Monitoring of Student Progress
6. Instructional Leadership
7. Home-School Relations

These characteristics may be said to describe the climate of a school. Barton (1984) showed that seventy percent of schools can be correctly identified into the effective category based on the differences in climate perceptions.

Ahmad (1981) found in his research that climate of elementary schools was significantly related to student achievement.

Shoemaker and Fraser (1981) based on their review of the research on school effectiveness declared that "principals apparently can make a difference" in schools (p. 178). Similarly Purkey and Smith (1983) concluded from their review that, "it seems clear that leadership is necessary to initiate and maintain the improvement process...and the principal is uniquely positioned to fill this role" (p. 443).

Leaders in schools significantly influence the educational process (Hawley, et al., 1984, p. 53). According to Bennis "the factor that improves the work force and ultimately determines which organizations succeed or fail is leadership" (cited in Lawson, 1988). While leadership can be provided by many people in an organization, one of the most widely accepted propositions about school effectiveness is that principals make a significant difference (Cohen, 1981; Edmonds, 1979). This concept was expressed by Chubb (1987) when he stated that:

> According to much of the new literature on school effectiveness the principal holds a key to school success. Excellence in education appears to be promoted by a principal who articulates clear goals, holds high expectations of students and teachers,

> exercises strong educational leadership, steers clear of administrative burdens, and effectively extracts resources from the environment. (p.235)

Leaders influence student achievement indirectly in schools by creating an organizational context and attitudes, and provide--often through negotiations between parents and community--the availability of learning resources. Moreover, "principals play a critical role in bringing about change necessary to increase the effectiveness of schools and teachers" (Hawley et al., 1984, p. 54). "Principals are central to linking people (teachers) together" (Andrews, 1987, p.380).

In their study of fifty elementary schools in London, Mortimore and Sammons (1987) discovered that among schools much of the variation on students' progress and development was accounted for by differences in school policies and practices. These researchers also indicated that it is the policies and practices within the control of the principal and teachers that are critical and that these factors can be changed and improved.

Mortimore and Sammons isolated twelve key factors in effective schools:

1. Purposeful leadership of the staff by the principal.

2. Strong involvement of an assistant principal.

3. Involvement in planning and participation in

curriculum development by teachers.

4. Continuity and consistency in approach among teachers.

5. Structure sessions of learning.

6. Intellectually challenging teaching - the students are stimulated and challenged.

7. Work-centered environment.

8. Limited focus within the learning sessions.

9. Maximum communication between students and teachers.

10. Effective record keeping.

11. Involvement of parents in the school.

12. Positive climate within the school. (p.7)

Throughout the research the principal is described as an instructional leader; the State Department of Education of Vermont extended this definition by stating that in an effective school, the principal:

- is the educational leader.
- establishes clear priorities and involves teachers in decision-making.
- sets clear rules and applies them consistently.
- emphasizes achievement and evaluation of basic objectives.
- spends time in the classroom, teaching and observing.

- has the ability to delegate and has faith in the competency of others.
- has high expectations of teachers and makes clear to teachers what is expected.
- is able to adjust his/her leadership style according to the situation.
- has central office support.
- concentrates on program development.
- involves students in the operation of the school and makes them responsible for aspects of the operation.
- gains community support.
- makes it as easy as possible for teachers to spend their time teaching.
- sets an example for students and faculty that learning is the most important work of the school (and doesn't, for example interrupt instruction with messages over the intercom) (cited in Neufeld, 1987).

"The components of school excellence, set forth in the literature on effective schools, are attainable for all schools, whether rural or urban" (Clarke, 1985, p. 85). Clarke went on to say that geographic isolation and size-limited resources are not major factors in the pursuit of schools effectiveness.

In 1980, the Journalism Research Fellows Report published the following findings with respect to effective rural schools which underscored the research on effective schools:

- rural school issues were community issues.
- rural school curriculum, while emphasizing academics, provided skills, attitudes and understanding of the real world.
- rural schools maintained order and a strict discipline code.
- rural schools tended to live in and be a part of the community.
- rural schools provided on-going staff development and growth.
- rural school climate was conducive to learning.
- rural school teachers maintained high expectations for learning. (Clarke, 1985)

Ward (1988) looked at how small, rural school districts are different from other school districts. He found that "small, rural school districts were stable educational communities with certain curricular advantages" (p. 1). It was also revealed that small rural schools and districts neither exceed nor lag behind in their ability to offer quality educational services. Ward echoed Clarke's findings in that the individual schools

studied presented some unique problems as well as opportunities but did not offer a substandard educational program of services. As Ward said "the so-called small rural school problem is really just a school problem. Some schools do very well; others are not operating according to expectation" (p. 6).

Leadership

Burns (1978) defined leadership as "a reciprocal process of mobilizing, by persons with certain motives and values, various economic, political, and other resources, in a context of competition and conflict, in order to realize goals independently or mutually held by both leaders and followers" (p. 425).

Rost (1987, p. 4) defined leadership as

> a reciprocal relationship wherein persons (leaders) who have a personal motivation to act and a valued purpose for acting, exert influence in a competitive situation by mobilizing resources that engage other persons (followers) to act in ways that realize goals mutually held by both leader and followers.

Leadership is thus seen as a relationship between followers and the leader and Rost's definition is an extension of Burns' and does not disagree with what Hawley et al. (1984) said about principals.

Lipham and Getzels in their review of leadership stated that, "the most recent approach to the study of

leadership is that of the analysis of leadership behaviour which recognizes that both psychological and sociological factors, and both individual and situational factors, are powerful behavioral determinants" (1987, p. 116). As Halpin (1959) stated the concept of leader behaviour focuses upon "observed behaviour rather than upon a posited capacity inferred from this behaviour" (p. 12).

Using the behavioral approach, theories of leadership have been developed. Halpin and Winer (1957) developed the Leader Behaviour Description Questionnaire and isolated two major dimensions of leadership: initiating structure and consideration. Getzels and Guba (1957) identified three leadership styles: normative, personal and transactional. Lipham and Rankin (1982) described a four-factor theory of educational leadership that included structural, facilitative, supportive, and participative leadership dimensions. Lipham, Rankin, and Hoeh (1985) defined leadership as that "behaviour of an individual that initiates a new structure in interaction within a social system by changing the goals, objectives, configurations, procedures, inputs, processes, or outputs of the system" (p. 66). This definition takes into account effectiveness and efficiency, group-achievement and group maintenance, situational and personalistic determinants, organizational and individual goals,

relationships, conflicts, context, and means and ends. "Leadership is dynamic, since it occurs in interactive social systems" (Lipham et al., 1985, p. 67).

Lawson (1988) in summarizing Bennis' study of successful leaders concluded that each to some extent had four competencies:

1. Management of Attention--the ability to draw others to them because they communicated an extraordinary focus of commitment;
2. Management of Meaning--the ability to communicate their vision, and get people to understand and support their goals;
3. Management of Trust--being consistent and reliable; and
4. Management of Self--knowing one's own skills and deploying then efficiently. (p.4)

Kouzes and Posner (1987) believe that leadership is an observable set of practices and that leadership is not something mystical and ethereal. They view leaders as displaying five major behaviors: (a) challenging the process, (b) inspiring a shared vision, (c) enabling others to act, (d) modelling the way, and (e) encouraging the heart. These behaviors again are not distinct from what has been said before but do allow behaviors of leadership to be quantified. Kouzes and Posner developed

these behaviors after studying leaders who performed at their best in a situation and developed an intended change. These behaviors exhibited by leaders enabled them to get extraordinary things done in their organization. Kouzes and Posner see a distinction between managers and leaders. They view the former as honoring stability, and controlling through systems and procedures. Leaders are seen as thriving on change; exercising "control" by means of a worthy and inspired vision of what might be, arrived at jointly with the people in their organization; and understanding that empowering people by expanding their roles is the only course to sustained relevance and vitality. Andrews (1987, p. 13) concurred when he stated "leaders know how to empower people." Lieberman (cited in Andrews, 1987) related this to principals when she said "whenever the spark of leadership emerges within their teachers they (principals) see it and nurture it" (p. 13), thus expanding the leadership team.

Hostetler (1984) found that there was a significant relationship between the behaviors of principals and those behaviors identified by Peters and Waterman in excellent companies.

Principals

Pitner (1981) reported that the work of principals

was characterized by (a) a low degree of self-initiated tasks; (b) many activities of short duration; (c) discontinuity caused by interruptions; (d) the superseding of prior plans by the needs of others in the organization; (e) face-to-face verbal contacts with one other person; (f) variability of tasks; (g) an extensive network of individuals and groups both internal and external to the school or district; (h) a hectic and unpredictable flow of work; (i) numerous unimportant decisions and trivial agendas; (j) few attempts at written communication; (k) events occurring in or near the administrator's office; (l) interactions predominantly with subordinates; and (m) a preference for problems and information that is specific, concrete, solvable, and currently pressing.

Greenfield (1982) noticed that there seemed to be a skewing of attention toward organizational maintenance tasks. Martin and Willower (1981) discovered that sixty percent of the principal's time was spent on desk work and in meetings and sixty-five percent of the time involves an interaction with or in the presence of others.

It was uncovered by Peterson (1978) that principals engage predominantly in service, advisory, and auditing relationships and that they tended not to be directly involved in the work flow at the classroom level. This study also revealed that principals did not become

involved to any great extent in classroom observation, curriculum development, and staff development. That is, they were not involved in the core instructional aspect of the school. Two other studies by Gross and Herriott (1965) and Duke, Cohen, and Herman (1981) established that women principals were more likely to function as instructional leaders.

Hallinger and Murphy (1989) studied the role of the principal in effective schools based on the social economic status of the schools. They discovered that in low SES schools the actions of the instructional leader tended to be more directive and forceful in setting high standards for teachers and students while buffering their schools from the environment. In the high SES effective schools the principals had far less to do with instruction and dealt more in community relations. They maintained a high profile while working as a mediator and go-between for parents and teachers while trying to maintain a consensus over the school's direction.

Morris, Crowson, Herwitz, and Porter-Gehrie (1982) confirmed that instructional leadership, by any definition, was not the central focus of the principalship.

Lortie (1975, p. 199) discovered that teachers want principals to support and facilitate their work.

In summarizing the research on the principalship, Greenfield (1982) found consistently that the principalship is highly interpersonal, full of ambiguous and conflicting expectations, possessed of considerable latitude in responding to situations, and confronted by a diverse range of problems, many of which are out of the principal's direct influence.

Leadership in Effective Schools

Schools identified as effective generally have been led by a strong leader. Sometimes these were considered "mavericks" who often are at odds with other principals and district administrators. Research has not very clearly defined what actions or behaviors will be necessary to replicate these models of effectiveness and what kind of training will be necessary for instructional leaders (Chrispeels & Meaney, 1985). In effective schools principals demonstrated strong leadership "especially in the areas of curriculum and instruction" (Chrispeels & Meaney, 1985, p. 15). Valverde (1988) stated that "effective schools have principals who care about instruction and who are proactive in educational program development" (p. 319). He went on to say that "principals who create effective schools place a high priority on instructional improvement." The principal plays a

critical role in communicating the mission and goals of the staff, parents and students. The principal sets the climate for frequent and regular discussions of teaching and learning (Lezotte, 1985). Valverde (1988) agreed that principals provide a positive climate conducive to learning because they set high but realistic standards, help the faculty to establish instructional goals, and assist teachers in helping students reach acceptable achievement levels.

Pollack, Chrispeels, and Watson (1987) in their study of descriptive factors of schools that become effective found the following instructional leadership attributes in equity schools: provided clear, strong centralized instructional leadership; was available and accessible; initiated coordination of instructional programs; was highly visible; gave feedback to teachers regarding instructional techniques; observed in classrooms and provided corrective feedback, and focused on instructional issues at staff meeting. Andrews (1987) believes that the characteristics most important for a principal as perceived by their teachers are: a visible presence in the school and a setting of the vision for the school. Andrews also found that "when teachers have a very positive perception of the quality of their workplace they are more productive, so there is an incremental growth in

student achievement" (p.10).

Scheerens and Creemers (1990) agreed that leadership is important. In fact they believe that many of the characteristics associated with effective schools are really aspects of leadership. "We might wonder whether `frequent evaluation' and `orderly climate' could not better be seen as aspects of strong instructional leadership, than as independent causes" (p. 3).

Chrispeels (1990) attempted to elaborate on the interrelationship of three components or school wide effectiveness factors. These three components were school climate and culture, curriculum and instructional practices and school organizational structure and procedures. She then elaborated on the interrelationship of these components with school leadership and student outcomes in effective schools. She hypothesized and concluded that "through leadership, the school wide variables are altered in ways that create a context as well as the parameters for learning in the classroom" (p.6).

Chrispeels (1990) defined leadership in a school as:

> an influence relationship among principal, school staff, students, community and district staff intended to bring about changes in the culture, curriculum and instruction, and organization of the school so that there are significant and equitable achievement gains for all ethnic and income groups. (p.38)

Based on this definition effective school leadership encompasses four broad dimensions: shared vision or mission; shared leadership; shared learning; and a committment to change. As a result of her study and the work of others (Bennis & Nanus, 1985; Fullen, Bennett, & Rolheiser-Bennett, 1990; Rosenholtz, 1989; Rossman, Corbett & Firestone, 1988) it was concluded that these dimensions of leadership are more "likely to bring about long lasting change that transforms the school to an institution where all children master the basic curriculum" (p. 38).

From studies on rural education (Smith, 1981; Berger, 1984) we know that leadership in some rural communities reflects the values of the community and that trust and understanding of the local social structure are as important as professional expertise (McLaughlin, 1982). It has also been shown that high expectations on the part of the existing leaders in rural schools lead to school improvements in rural school development projects (MCREL, 1985). "The significant role played by principals in creating effective schools is just as relevant in rural districts" as it is in urban school districts (Jacobson, 1986, p.3).

Nachtigal (1982) found that rural schools are more or less integrated in the sense that they have a very tight

social structure which depends upon how integrated and tightly organized the community is. This points out that schools and school districts are composites of multiple special interest groups, each with their own agenda. Rural schools were described by Nachtigal (1982) as: non-bureaucratic, emphasizing quality, self sufficient, responsive to the environment, and personal or tightly linked, all of which reflected the role and style of the principal of the particular school.

Attempts to improve rural school leadership have assumed that there has been a deficit in leadership (Meyers, 1987) and these programs to improve leadership have been generic in nature. Leadership development activities seem to have focused primarily on designated leaders. There are many examples of developmental activities which are generally aimed at rural school organizations and which provided opportunities for leadership development.

Meyers (1987) found that there is a great diversity in successful leadership styles which seems to reflect the diversity of organizations and community patterns of norms, values, and size. In addition Meyers (1987) stated that

> when it comes to institutionalizing school development we still have not got it right and we still do not have a clear picture of leadership in schools and the mythology of the

> principal...like all myths...has been revered in thought or as an ideal than it has been in practice. (cited in Rost, 1987, p. 1)

The above citations about effective schools, leadership behaviors of principals, and rural schools and their principals are from diverse sources. These sources identify particular elements of schools that have been identified as effective; they also deal to some extent with the leadership behaviors of principals and the situation in rural schools. However, the combination and the differences of the behaviors of principals as leaders in regard to the structure and location of schools have never been integrated.

Chapter 3

RESEARCH DESIGN

Significance of the Study

Results of this study will contribute to the literature which is lacking in the area of rural school leadership, and the role of the behaviors of the principals in the effectiveness of rural education. It is further hoped that by identifying the leadership behaviors that are not presently being displayed, educational programs can be designed that focus on the total aspect of leadership and emphasize the missing attributes. This study will also provide a foundation for future studies of educational leadership in the rural setting as it exists in various educational institutions.

Research Questions

The following research questions were addressed in the proposed study:

1. Are there significant differences in the behaviors of principals in schools that have been

identified as effective compared to those principals in schools that have not been identified as effective?

2. Are the leadership behaviors as identified by the Leadership Practices Inventory Self and Other (LPI-S and LPI-O) found in the various schools in Saskatchewan?

3. Are there differences in the principals' perceptions of their leadership behavior as identified by the LPI-S and those perceptions of the other staff members as indicated on the LPI-O?

4. Are there significant differences between the leadership behaviors of principals as identified by the LPI-S and the LPI-O in:

a. Rural and urban schools?

b. The three types of rural schools (elementary, high and K-12)?

c. The two types of urban schools (elementary and high)?

Data Base and Instrumentation

Data was collected on the sample utilizing the Saskatchewan Department of Education's records. School demographic data was used to differentiate the different types of schools within the province.

Instrumentation for the testing included: (a) The Leadership Practices Inventory-Self (LPI-S), and (b) The

Leadership Practices Inventory Other (LPI-O). These may be found in Appendices A and B. These two instruments where developed by Kouzes and Posner after examining the experiences of 500 middle and senior-level managers at their personal best.

The LPI-S consists of 30 behaviorally based statements. Each statement is cast on a five-point Likert scale: (1) rarely or never do what is described in the statement, (2) once in a while do what is described, (3) sometimes do what is described, (4) fairly often do what is described, and (5) very frequently, if not always, do what is described in the statement. A higher value represents a greater use of a leadership behaviour.

The LPI-O also consists of 30 behaviorally based statements also using a Likert scale approach. Procedurally principals completed the LPI-S and also requested five other people who were familiar with their behaviour to complete the LPI-O. The LPI-O was voluntary and confidential. The forms were returned directly to the researcher.

The internal reliabilities of the LPI-S have been determined to range from .69 to .85 and on the LPI-O from .78 to .90. Test-retest reliability averaged in studies on M.B.A. students has been found to be better than .93.

Factor analyses have indicated that the scales are

generally orthogonal; they do not all measure the same phenomena. Results from the two inventories do have high face validity and predictive validity in that the results make sense to people and they predict high performing leaders as well as moderate and low performing ones.

The inventories examined leadership behaviour under the following five practices, each of which consists of two basic strategies:

1. Challenging the process
    a. Search for opportunities
    b. Experiment and take risks
2. Inspire a shared vision
    a. Envision the future
    b. Enlist others
3. Enabling others to act
    a. Foster collaboration
    b. Strengthen others
4. Modelling the way
    a. Set the example
    b. Plan small wins
5. Encouraging the heart
    a. Recognize contributions
    b. Celebrate accomplishments

The effectiveness of the schools was determined using a modified version of the San Diego County Office of

Education Effective Schools Survey (Appendix C).

This instrument is of the survey design and is broken into seven areas: Instructional Leadership (IL), Home School Relationships (HSR), Clear School Mission (CSM), Frequent Monitoring (FM), Opportunity to Learn (OL), Safe and Orderly Environment (SOE), and High Expectations (HE). The Effective schools instrument also uses the Likert scale approach. Procedurally, each individual completed this instrument and their responses reflected their perceptions as to whether or not the situation described pertained to their school. The scale for the instrument examined their agreement or disagreement for each individual statement. A higher value represented a greater agreement with the statement as it pertained to their school: (1) strongly disagree, (2) disagree, (3) don't know, (4) agree, and (5) strongly agree.

The overall reliability of this instrument is very high (Alpha = 0.977) and the factor loading between the subsets is very strong (approximately 70% of variance accounted for through the extraction of a principal component--based on a Factor subprogram of SPSS Inc., (San Diego County Office of Education, 1988). The commonality estimates are all reasonably high (from .5 to .821)

Schools that have had increased academic performance for all students over three years, have been grouped

correctly by the survey which utilizes the seven characteristics. The percent of accuracy is between 86.82% and 93.33% depending upon the individual weightings assigned to the individual questions in the survey.

Schools were grouped into three categories; effective, average and non effective using a discriminant analysis based upon a SPSS-X run as found in Appendix H.

Methodology

A. Design

This investigation involved the participants answering the questionnaire one time only. The LPI-O was also answered by the participants' followers at approximately the same time.

B. Sample

There were two major samples used in this study. The first was composed of rural school principals from the province of Saskatchewan. These schools were stratified into three subgroups:

1. Schools that do not have any grade nine to twelve classes--these were called elementary schools;

2. Schools that do not have any kindergarten to grade five classes but do have grades nine to twelve--these were called high schools; and

3. Schools that have classes from kindergarten to grade twelve--these were called K-12 schools.

The second sample group was made up of urban school principals within the province of Saskatchewan and these were compared to the rural school principals. The urban schools were stratified into two subgroups:

1. Schools that do not have any grade nine to twelve classes--these were called elementary schools; and

2. Schools that do not have any kindergarten to grade five classes but do have grades nine to twelve--these were called high schools. (Note there are no K-12 schools in Urban Saskatchewan).

From each of the rural school subgroups a target population of 30 school principals was randomly selected using a table of random numbers to minimize sampling error. From each of the two urban subgroups, a target population of twenty principals was randomly selected using a table of random numbers to minimize the sampling error.

The smaller urban samples were a result of a small sample pool and the emphasis of the study on rural principals.

The total rural sample was 90 principals and 450 others while the urban sample included 40 principals and 200 others.

C. Procedures

Both the urban and rural groups participated in the completion of the LPI and the LPI-O and the Effective Schools Survey. All statistical analysis was done through the use of the SPSS Inc., (1986) computer program. T Tests of differences between scores on the LPI-S and the LPI-O were utilized for data analysis. The level of significance was preset at .05 for support or non-support of the study questions.

A Pearson correlation was also used to compare the LPI-S and the LPI-O for each principal and for each behavioral factor. Again the level of significance was .05.

T-tests were used to compare the differences between scores on the Effective Schools Survey between principals and others. A Pearson's correlation was used to compare the LPI-S and the principal's score on the Effective Schools Survey. A similar correlation was used to compare the LPI-O and the others' scores on the Effective Schools Survey.

T-tests were also used to compare the rural and urban LPI and LPI-O data. Utilizing only the responses from the LPI-O, the relationship between leaders' effectiveness and their behaviour as measured on the LPI-O was assessed using a regression analysis with leader effectiveness as

the dependent variable and the five practices from the LPI-O the independent variables.

Summary

This chapter introduced the significance of the study and the research questions that were addressed. The instrumentation used in the study was also presented and discussed in terms of usefulness and reliability.

The methodology section dealt with the design of the investigation, the development of the experimental sample and the procedures used in the investigation and the analysis of the data.

Chapter 4

ANALYSIS OF THE DATA

Introduction

The purpose of this study was to compare the behaviours of rural school principals as perceived by themselves and as perceived by their fellow workers. This study also examined principals' behaviours and their relationship to the effectiveness of the individual schools involved in the study. The study also looked at the behaviours of rural school principals to see if they were congruent within the various school structures: elementary, high school, or kindergarten to grade twelve; and to see if the behaviours are congruent with those exhibited by urban principals who operate in elementary and high school structures.

The original letter of introduction and the description of the study (Appendix G) were sent to the various schools within the province to identify which schools would agree to participate in the study and to find out if the principals were in their first year as principal in that particular school. These letters were

sent out randomly throughout the province. The sample was drawn from the Department of Education list of schools which had been stratified into the five classifications. The original sample was as follows:

Rural - elementary -- 30 schools
- high school -- 30 schools
- K - 12 -- 30 schools

Urban - elementary -- 20 schools
- high school -- 20 schools

Total -- 130 schools

From the original sample of 130 schools 47 were rejected and replaced by other schools which were again randomly selected from the stratified lists. Schools were rejected for two reasons: the principals were in their first year of the principalship at that particular school; or the school was too small, less than five teachers. This process was repeated until there were 130 schools that met the required criteria.

Response Frequencies

The surveys were sent to the various schools and 91 schools or 70% returned the completed questionnaires. Table 1 indicates the breakdown of the schools and the number of responses.

The original letter requested that the principal and five other staff members (teachers) complete the

questionnaires. That meant that there was a possibility of 780 responses or 6 from each school. Of the 91 schools that responded there were 91 responses from principals and 406 teacher responses out of the possible 455. This means that on average each school was represented by 4.41 teachers, a response rate of 89.2% among observers.

Table 1

Completed Responses From Sampled Schools

School Type	Original Sample	Responses	%
Rural Elementary	30	21	70
Rural High	30	20	66.7
Rural K-12	30	21	70
Urban Elementary	20	14	70
Urban High	20	15	75
Total	130	91	70

The range of teacher/observer responses per school was from 2 to 5. The total number of responses was then 91 principals and 406 staff for a grand total of 497 or 63.72% of the possible original sample.

Tables 2 and 3 provide information regarding the characteristics of the sample.

Table 2

Characteristics of the Sample: Principals

Principals N=89		
Type of School		
Rural		
Elementary	21	23.6%
High School	19	21.3%
K-12	20	22.5%
Urban		
Elementary	14	15.7%
High School	15	16.9%
System		
Public	68	76.4%
Separate	17	19.1%
Private	4	4.4%
Principal Tenure		
Less than two years	23	25.8%
From 3 to 7 years	43	48.3%
From 8 to 15 years	17	19.1%
More thaat 15 years	6	6.7%
Age		
Under 25	1	1.1%
26-35	15	16.9%
36-45	43	48.3%
46-55	26	29.2%
Older than 55	4	4.5%
Sex		
Female	12	13.5%
Male	77	86.5%
Education		
Less than a Bachelors degree	1	1.1%
A Bachelors degree	13	14.6%
More than one Bachelors degree	43	48.3%
A Masters degree	32	36.0%
A doctorate	0	0.0%

Table 3

Characteristics of the Sample: Observers

Observers N = 406

Length of time in school		
Less than two years	81	20%
From 3 to 7 years	179	44%
From 8 to 15 years	73	18%
More than 15 years	73	18%
Age		
Under 25	32	8%
26-35	114	28%
36-45	163	40%
46-55	81	20%
Older than 55	16	4%
Sex		
Female	114	28%
Male	292	72%
Education Level		
Less than a Bachelors degree	8	2%
A Bachelors Degree	138	34%
More than one Bachelors degree	244	60%
A Masters degree	16	4%
A doctorate	0	0%
Position		
Vice-principal	12	4%
Assistant principal	0	0%
Teacher	292	72%
Department chairman	82	20%
Non-teaching staff member	16	4%

Effectiveness of Schools

The questionnaires were designed to elicit information regarding the effectiveness of the school and the leadership behaviors of the principal. The effective school aspect of the study used a modified survey from the San Diego County Office of Education. Using discriminant

analysis provided by the County Office of Education the schools were identified as being effective, average or ineffective. Using the SPSS, Inc., (1986) computer program these schools were identified based on the observations made by the principal and teachers, the principals alone and the teachers (observers) themselves. Table 4 indicates the breakdown of the schools evaluated by both the principals and observers. It reveals that the combined group viewed only 14.3% of the schools as effective. Table 4 also indicates that the principals alone saw 26.4% of their schools as effective while the teachers alone saw 17.6% of their schools as effective.

Table 5 breaks down the evaluation of schools into the rural and urban categories. The principals and observers together perceived 12.9% of the rural schools and 17.2% of the urban schools as effective.

The principals alone viewed 20% of the rural schools and 41% of the urban schools as effective. The teachers perceptions were different in that they viewed 22.6% of their rural schools and only 6.9% of the urban schools as effective.

A further discrimination into types of schools is found in Table 5. The principals and observers together using their combined mean scores saw the rural K-12 schools and the urban elementary schools as being the

Table 4

Schools Identified as Effective, Average or Ineffective

Value Label	Value	Frequency		Percent
	Principals and Observers			
Effective	1.00	13		14.3
Average	2.00	69		75.8
Ineffective	3.00	9		9.9
Total		91		100.0
Mean 1.956	Mode 2.00		Std Dev	.492
	Principals			
Effective	1.00	24		26.4
Average	2.00	46		50.5
Ineffective	3.00	19		20.9
Total		89	(2 missing)	97.8
Mean 1.944	Mode 2.00		Std Dev	.697
	Observers			
Effective	1.00	16		17.6
Average	2.00	63		69.2
Ineffective	3.00	12		13.2
Total		91		100.0
Mean 1.857	Mode 2.00		Std Dev	.556

most effective at 28.6%.

The principals themselves saw the urban schools as much more effective in that 40% of their schools were viewed as effective compared to 20% of the rural schools.

The Rural High School principals saw their schools as being the least effective; whereas, at least 25% of the other rural school principals perceived their schools were effective. The observers' perceptions were significantly different in that they perceived 42.8% of the Rural K-12 schools as being effective. The teachers also viewed more rural schools as effective than did the principals. However, teachers perceptions of the urban schools were less favorable as only one school of each school type was seen as being effective.

When grouped together teachers and principals and principals alone saw no significant difference between urban and rural schools or between the different types of schools within the province of Saskatchewan. However, teacher's/observer's perceptions of effective schools are significantly different (Pearson's Chi Square of 9.54, Df=2, $p>.01$) between urban and rural schools. A significant difference (Pearson's Chi Square of 22, Df=8, $p<.01$) between the different types of schools in rural and urban Saskatchewan according to teacher's perceptions was found.

Table 5

Effectiveness of Rural and Urban Schools by Respondent

	Rural (%)	Urban (%)
Principal		
Effective	12 (20.0%)	12 (41.4%)
Average	33 (55.0%)	13 (44.8%)
Ineffective	15 (25.0%)	4 (13.8%)
Observers		
Effective	14 (22.6%)	2 (6.9%)
Average	44 (70.9%)	19 (65.6%)
Ineffective	4 (6.5%)	8 (27.5%)
Principals and Observers		
Effective	8 (12.9%)	5 (17.2%)
Average	49 (79.0%)	20 (69.0%)
Ineffective	5 (8.1%)	4 (13.8%)

Table 6

Effectiveness of Schools by Type of School and by Respondent

	Rural			Urban	
	Elm(%)	H.S. (%)	K-12 (%)	Elm (%)	H.S. (%)
Principal					
Effective	6(28.6)	1(5.3)	5(25)	6(42.9)	6(40)
Average	10(47.6)	12(63.2)	11(55)	8(57.1)	5(33.3)
Ineffective	5(23.8)	6(31.5)	4(20)		4(26.7)
Observers					
Effective	1 (4.8)	4(20)	9(42.9)	1(7.1)	1(6.6)
Average	19(90.4)	13(65)	12(57.1)	9(64.3)	10(66.7)
Ineffective	1 (4.8)	3(15)		4(28.6)	4(26.7)
Principals and Observers					
Effective	1(4.8)	1 (5)	6(28.6)	4(28.6)	1(6.7)
Average	18(85.7)	17(85)	14(66.7)	8(57.1)	12(80.0)
Ineffective	2(9.5)	2(10)	1(4.8)	2(14.3)	2(13.3)

Using a one-way analysis of variance, QL-eval, which is the mean of the scores on the School Effectiveness Survey completed by the principals, was analyzed by different school types. Based on this evaluation and using the Student Newman-Keuls procedure and the Tukey-HSD

procedure a significant difference was found between rural elementary (Group #1) and rural K-12 schools (Group #3) {F(4,85) =2.67,p<.05}. The more conservative Scheffe procedure found that no two groups were significantly different at the .05 level.

A similar analysis was carried out with the variable the mean of the observers' evaluations on the School Effectiveness Survey (XEVALOB). The Student-Newman-Keuls and the Tukey procedures revealed that the means of the rural elementary schools (Group #1) and means of the rural high school (Group #2) are significantly different {F(4,86)=3.26, p<.05}. Again, the more conservative Scheffe procedure found no significant differences.

An analysis of variance on principals' and observer's effectiveness scores by 5 school types indicated a significant difference between groups {F(4,86)=4.30, p<.05}. Post hoc analysis using the Student-Newman-Keuls procedure and the Tukey-HSD procedure indicated the groups that differed were rural elementary and the rural high schools and the rural elementary schools and the rural K-12 schools. These results were also shown when the more conservative Scheffe procedure was used.

Research Question #1

Research Question #1: Are there significant

differences in the behaviours of principals in schools that have been identified as effective compared to those principals in schools that have not been identified as effective?

T-tests assume that scores in one group have about the same degree of variability as scores in the second group. Therefore, before the T-tests were performed tests for homogeneity of variance were performed. If the variances were found not to be significantly different between groups, then the T-test of pooled variance was used. If there was a significant difference in the variances, then the T-test using a separate variance estimate was used.

A significant difference in a T-test means that there is a significant difference between the means of the two groups being examined and thus the means are not equal and a null hypothesis would have to be rejected.

The T-Tests were used to see if there was a significant difference in the behaviours of principals in schools that had been identified as effective compared to those principals in schools that had not been identified as effective.

The comparision was accomplished using three different mean scores (principal's, observers', and a combined principal's and observers') for each of the five leadership behaviours as found in the LPI-S and the LPI-O,

the mean of the principal's average for the five scales (linear-S), the mean of the observers' average for the five scales (linear-O) and a recoded score of each of the leadership behaviour variables from high to low categories. In each case the desire is to retain the null hypothesis with regard to variance and reject the null hypothesis with regard to the means.

T-tests were used to analyze the means of the combined mean score of principal and observers, for classification of schools into effective and ineffective. Only in one case that of S-CHA, the variable of Challenging the Process, with an F value of 4.34 was the 2-tailed probability less than .05 meaning that the variance within this factor was greater than that found in random sampling. In this case the separate variance estimate was used (t value=-1.59, n.s.). In all other cases a pooled variance estimate was used. The 2-tailed probabilities were examined and in all cases except for the variable INSPIRE (recoded principal's observations into high, moderate and low categories) the values were found to be greater than .05 thus indicating that there is no significant difference between the behaviours in schools identified as effective and those identified as noneffective. The INSPIRE variable (recoded principal's observations into high, moderate and low categories) showed a significant difference between effective and non-

effective schools as identified by principals and observers (t value=2.16, Df=18.4, p<.05).

When school effectiveness based only on the observers' mean scores was analyzed using T-tests, it was found that all groups were homogeneous in their variance since all the 2-tailed probabilities for the F-value were greater than .05. This analysis also indicated that there was no significant difference between the mean scores of the effective and ineffective schools for the different behavioral variables except for the variable S-Cha (challenging the process)(t=-2.12, p< or =.05).

The principal's classification of schools indicated that again the groups showed little variance and all variables were examined under the pooled variance estimate. The variable S-Ins (inspiring the vision) showed a significant difference between the mean scores of effective and ineffective schools (t=-2.06, p< or = .05). The other variables (challenging, enabling, modelling and encouraging) all indicated there was no significant difference in the mean scores between the two types of schools (effective and noneffective).

After recoding the classification of schools into effective versus average or noneffective, similar T-tests were performed on the same leadership behavioral variables. The schools were classified based on the mean of the principal's and observers' evaluation (XCLASS), the

principal's evaluation (XCLASSL) and the observers' evaluations (XCLASSO). The variability between groups was examined and thus either the pooled or separate variance estimates were used. In no cases were there significant differences between the means for the types of schools.

In summary significant differences were found in the leadership behaviours of principals in effective and noneffective schools. Principals perceived significant differences in the behaviour inspiring a shared vision. Teachers saw principals' behaviour as significantly different in the variable challenging the process, while both principals and observers together perceived significant differences in the principal's behaviours in effective school in the leadership behaviour inspiring a shared vision.

Research Question #2

Research Question #2: Are the leadership behaviours as identified by the Leadership Practices Inventory Self and Other (LPI-self and LPI-other) found in the various schools in Saskatchewan?

Figure 1 (Appendix F) represents the percentile ranking for all leaders who had taken the LPI-S until 1988. From the previous studies any score above the 70th percentile was ranked as high and below the 30th percentile was ranked as low. A moderate ranking was

established between the 30th and 70th percentiles. The scores for each of the five behaviors indicated that the leaders perceived that they have these behaviors and the higher the scores the greater the likelihood that the perception is one of an effective leader.

Table 7 indicates that 28.6% of the principals in Saskatchewan saw themselves as high in the area of challenging the process. The table also specifies that 45.2% or slightly less that one-half of the principals saw that they would score low in this area.

The section of the table dealing with the behaviour inspiring a shared vision reveals that 34.8% scored above the 70th percentile or high while only 24.7% scored low or below the 30th percentile.

41.2% of the principals in Saskatchewan saw themselves scoring high on the behaviour of enabling others to act while 20% were below the 30th percentile.

The behaviour of modelling the way as perceived by the principals scored high in 36.8% of the cases whereas 26.4% of the cases scored low.

The table also shows that for the behaviour of encouraging the heart 36% of the principals scored themselves highly while 24.7% scored themselves in the low category.

On a scale of 1 to 3 with 3 being a low perception or below the 30th percentile and 1 being a high value or

Table 7

Principal's Ratings on Leadership Behaviors as Perceived on the LPI-S

Value Label	Frequency	Percent	Valid Percent
	CHALLENGING		
High	24	26.4	28.6
Moderate	22	24.2	26.2
Low	38	41.8	45.2
	7	7.7	Missing
Total	91	100.0	100.0
Mean 2.167			Std dev .848
	INSPIRING		
High	31	34.1	34.8
Moderate	36	39.6	40.4
Low	22	24.2	24.7
	2	2.2	Missing
Total	91	100.0	100.0
Mean 1.899			Std dev .769
	ENABLING		
High	35	39.5	41.2
Moderate	33	36.3	38.8
Low	17	18.7	20.0
	6	6.6	Missing
Total	91	100.0	100.0
Mean 1.788			Std dev .757
	MODELLING		
High	32	35.2	36.8
Moderate	32	35.2	36.8
Low	23	25.3	26.4
	4	4.4	Missing
Total	91	100.0	100.0
Mean 1.897			Std dev .793
	ENCOURAGING		
High	32	35.2	36.0
Moderate	35	38.5	39.3
Low	22	24.2	24.7
	2	2.2	Missing
Total	91	100.0	100.0
Mean 1.888			Std dev .775

Note: missing cases a result of principals not completing every question on the survey

above the 70th percentile the principals gave themselves

mean scores ranging from a low of 2.167 for Challenging to a high of 1.788 for Enabling.

These scores indicate that the principals did perceive that they practiced these behaviours. In the case of four behaviours, Inspiring, Enabling, Modelling and Encouraging, the principals perceived that they were demonstrating these behaviours of leadership and their average scores would be above the 50th percentile. In the case of the behaviour, Challenging, it was perceived to be lower and in fact the mean score would be below the 50th percentile.

Research Question #3

Research Question #3: Are there differences in the principals' perceptions of their leadership behaviour as identified by the LPI-S and those perceptions of the other staff members as indicated on the LPI-O?

The observers had similar perceptions; however, their scores were lower. The mean scores from the observers perceptions are found in Table 8.

Table 8 indicates that the observers did perceive the behaviours to be shown by principals in Saskatchewan; however, these perceptions were at lower rate than the principals' perceptions. All scores were below the 50th percentile with the behaviour Challenging the Process very low.

There is a parallel perception between the two groups in that the challenging behaviour was scored the lowest. The behaviours inspiring, modelling and encouraging were scored high and very close in their

Table 8

Mean Scores of Principal's Leadership Behaviours as Perceived by Observers on the LPI-O: (n=406)

Behaviour	Mean	Percentile (Approx)	Value Rating
Challenging	21.290	24	Low
Inspiring	20.691	46	Moderate
Enabling	23.894	40	Moderate
Modeling	22.465	47	Moderate
Encouraging	22.112	45	Moderate

scores with enabling the highest score for observers.

The teachers/observers did score the principals lower and this is in agreement with what Kouzes and Posner had discovered; leaders generally perceived that they exhibited these behaviours more frequently than the observers perceived them to be exhibited.

Research Question #4

Research Question #4: Are there significant

differences between the leadership behaviours of principals as identified by the LPI-S and the LPI-O in:

a. Rural and urban schools?

b. The three types of rural schools (elementary, high and K-12)?

c. The two types of urban schools (elementary and high)?

This research question was concerned with the differences in leadership behaviours of principals, as identified by the LPI-S and the LPI-O, in the different school settings. In order to address this type of question a one-way analysis of variance was used. In order to reject a null hypothesis that the means of the populations were equal and thus there was no significant difference, the F-ratio must exceed the critical value at the .05 level of significance. If the F-ratio is less than the critical value at the .05 level of significance it can be assumed that the population means of the groups are equal and random sampling fluxuations cannot be discounted as an explanation for the differences between the means.

Based on the findings between rural and urban schools where principals' perceptions were compared for each of the five behaviours, there are no significant differences since the probabilities of the F-ratios are all greater than the .05 level of significance.

The means between the observers' perceptions on the five behaviours were also examined using a one-way analysis of variance and again the probabilities for the F-ratios were greater than the established value of .05, thus indicating that the differences between group means were not significant.

The mean of the principal's averages for the five scales (Linear-S) and the mean of the observers' averages for the five scales (Linear-O) were also examined by school type (rural-urban), F-ratios of 1.59 (n.s.) and 1.98 (n.s.) respectively. Therefore, a null hypothesis that the means of the groups are equal would be retained.

The question as to whether there was a significant difference between the leadership behaviours of principals as identified by the LPI-S and the LPI-O in the three types of rural schools (elementary, high and K-12) was also addressed using a one-way analysis of variance. Since there were three groups involved, a multiple range test using the Scheffe procedure was also used. This method was used to see if there was a significant difference within the groups since the group sample sizes were unequal.

In each case where the principal's or observers' perceptions were examined under each of the five behaviours there was no significant difference and thus

one would retain a null hypothesis (F probability greater than .05) which would state that the means of each group were equal for each of the variables tested. The mean of the observers' (Linear-O) and the mean of the principal's averages (Linear-S) for each of the five behavioral scales were also examined using the one-way analysis of variance for the three rural types of schools. The analysis showed no significant differences in either the principals' mean between the three types of schools {F(2,58)=1.49, n.s.} or the observers' {F(2,59)=.75, n.s.}.

Using an analysis of variance the two types of urban schools (elementary and high school) were examined for each of the five behavioral characteristics as identified by the LPI-S and LPI-O. It was found that two variables, S-Ins (the sum of the LPI-S inspire items) and Linear-S (the mean of the principal's averages for the five scales), had F probabilities less that 0.05 {F (1,27)=5.65 and F(1,27)=4.99}. The differences between the means in these cases is therefore greater than can be expected due to random sampling and therefore there is a significant difference between the population means.

The other variables examined for the urban schools had no significant differences.

Using the Pearson correlation coefficients it was found that there is no significant correlation between school type (rural and urban) and the five leadership

behaviours as identified by the LPI-S and the LPI-O.

Leader Effectiveness and the Five Behavioural Practices

Pearson correlation coefficients were used to determine if there was a significant relationship between the following variables:

Class - normed items classification using means of principal's and observers' evaluations;

ClassL - normed items classification using means of principal's observations;

ClassO - normed items classification using means of observers' observations;

School type - rural-urban and type of school;

Linear O - mean of observers' average for the five behavioural scales on the LPI-O;

Linear S - mean of principal's averages for the five behavioral scales on the LPI-S;

The sum of the LPI-S items for each variable (S-Cha, S-Ins, S-Enc, S-Mod, and S-Ena);

The mean of the observers' ratings for each variable (O-Cha, O-Ins, O-Enc, O-Mod, and O-Ena).

When the direction of the relationship between the pairs of variables can be specified in advance of the analysis, the partial corelation coefficient would be based on a one-tailed test. Since this could not be determined in advance, a two-tailed test was appropriate.

Table 9 provides the Pearson correlation coefficients for the paired variables under such a two-tailed test. The SPSS-X program also indicated which of the relationships were significant at the .01 and the .001 level. The .05 level of significance was predetermined for the purpose of this study and thus using a degree of freedom of n-2 a value of greater than .025 became significant at the .05 level. Using Table 9 the following pairs were determined to have a significant relationship at the .05 level or lower:

-O-Ins and S-Cha
-Linear O and Linear S
-Linear O and S-Cha and S-Mod
-O-Cha and S-Cha
-O-Ins and S-Ins
-O-Ins and S-Mod
-Linear S and O-Enc and O-Ins
-O-Enc and S-Enc
-O-Mod and S-MOd
-O-Enc and S-Mod
-ClassO and S-Cha
-Linear O and S-Ins and S-Enc
-Linear S and O-Cha and O-Enc
-O-Cha and S-Ins and S-Mod
-O-Ins and S-Enc
-O-Enc and S-Enc, S-Cha and S-Ins

From the table and the above list of correlated pairs there is a significant relationship ($r=.316$, $p< or = .01$) at the .01 level between the means of the observers' ratings on the five behavioural scales and the mean of the principal's rating on the five behavioural scales.

Utilizing the responses from the LPI-O the relationship between leader's effectiveness and their behaviour as measured on the LPI-O was assessed using a

regression analysis with leader effectiveness as the dependent variable and the five behavioural practices from the LPI the independent variables.

A stepwise analysis was run thus enabling a maximum prediction using a minimum number of variables to be made. If an explanatory situation was desired, then a simultaneous entry format would have been used.

The highest correlated behavioural variable to the effectiveness variable was O-Ins (inspiring) at .640 (Table 10). Therefore, this was the first variable entered into the equation and the adjusted R-square indicated it made up 40.97% of the variance (Table 10). When the next variable O-Ena (enabling) was added 48.2% of the variance was accounted for. The second variable was chosen because of its high correlation with the effectiveness variable (XEVALOB), .629, and its low correlation with O-Ins, .674. It should be noted that the .674 is a high correlation yet it was the lowest when compared to the other variable choices. Variable selection terminated at this point, with none of the variables meeting entry and removal criteria.

The equation (using Beta or standard scores) then for predicting the effectiveness of the leader (based on school effectivness) using the LPI variables would be:

$$Zy = .395\ Z_{o\text{-}ins} + .363\ Z_{o\text{-}ena}$$

Table 9

School Type vs. Five Leadership Behaviours

- - - - - - - - - - - - - - - PEARSON CORRELATION COEFFICIENTS - - - - - - - - - - - - - -

	CLASS	CLASSL	CLASSO	SCH_TYPE	LINEAR_O	LINEAR_S	S_CHA	S_INS	S_ENA	S_MOD	S_ENC
CLASS	1.0000	.1892	.6422**	-.0614	.0214	.1423	.1628	.1755	.1445	.0814	.0077
CLASSL	.1892	1.0000	-.1235	-.1620	.0573	.1469	.1754	.2045	.0111	.1503	.0214
CLASSO	.6422**	-.1235	1.0000	.1322	.0682	.1895	.2558	.1472	.0947	.1322	.1210
SCH_TYPE	-.0614	-.1620	.1322	1.0000	.0550	.0870	.0858	.0886	.0924	.0619	.0221
LINEAR_O	.0214	.0573	.0682	.0550	1.0000	.3157*	.2904*	.2431	.1909	.3213*	.2165
LINEAR_S	.1423	.1469	.1895	.0870	.3157*	1.0000	.8265**	.8133**	.7256**	.8230**	.7951**
S_CHA	.1628	.1754	.2558	.0858	.2904*	.8265**	1.0000	.6426**	.4578**	.6118**	.5674**
S_INS	.1755	.2045	.1472	.0886	.2431	.8133**	.6426**	1.0000	.4467**	.5589**	.5617**
S_ENA	.1445	.0111	.0947	.0924	.1909	.7256**	.4578**	.4467**	1.0000	.5962**	.4467**
S_MOD	.0814	.1503	.1322	.0619	.3213*	.8230**	.6118**	.5589**	.5962**	1.0000	.5506**
S_ENC	.0077	.0214	.1210	.0221	.2165	.7951**	.5674**	.5617**	.4467**	.5506**	1.0000
O_CHA	.0497	.0420	.1058	.0813	.8841**	.2631	.2780*	.2482	.1069	.2644	.1496
O_INS	.1084	.1481	.1438	.0400	.9201**	.3402*	.3628**	.2908*	.1562	.2866*	.2515
O_ENA	-.0149	.0060	.0489	.0016	.8343**	.2174	.1642	.1439	.2690	.2133	.0948
O_MOD	-.0855	.0566	.0011	.0017	.8733**	.2264	.1978	.1640	.1019	.3274*	.1218
O_ENC	.0328	-.0054	.0027	.1159	.8800**	.3308*	.2665	.2183	.1999	.3147*	.3169*

* - SIGNIF. LE .01 ** - SIGNIF. LE .001 (2-TAILED, " . " PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

	O_CHA	O_INS	O_ENA	O_MOD	O_ENC
CLASS	.0497	.1084	-.0149	-.0855	.0328
CLASSL	.0420	.1481	.0060	.0566	-.0054
CLASSO	.1058	.1438	.0489	.0011	.0027
SCH_TYPE	.0813	.0400	.0016	.0017	.1159
LINEAR_O	.8841**	.9201**	.8343**	.8733**	.8800**
LINEAR_S	.2631	.3402*	.2174	.2264	.3308*
S_CHA	.2780*	.3628**	.1642	.1978	.2665
S_INS	.2482	.2908*	.1439	.1640	.2183
S_ENA	.1069	.1562	.2690	.1019	.1999
S_MOD	.2644	.2866*	.2133	.3274*	.3147*
S_ENC	.1496	.2515	.0948	.1218	.3169*
O_CHA	1.0000	.8839**	.6068**	.7089**	.7015**
O_INS	.8839**	1.0000	.6741**	.7345**	.7481**
O_ENA	.6068**	.6741**	1.0000	.6901**	.6946**
O_MOD	.7089**	.7345**	.6901**	1.0000	.7033**
O_ENC	.7015**	.7481**	.6946**	.7033**	1.0000

* - SIGNIF. LE .01 ** - SIGNIF. LE .001 (2-TAILED, " . " PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

Table 10

Leadership Effectiveness vs. Each of Five Behaviours

* * * * MULTIPLE REGRESSION * * * *

Listwise Deletion of Missing Data

	Mean	Std Dev	Variance	Label
XEVALOB	3.672	.302	.091	
O_CHA	21.290	2.852	8.133	
O_INS	20.691	3.323	11.041	
O_ENA	23.394	3.082	9.500	
O_MOD	22.465	3.142	9.869	
O_ENC	22.112	3.327	11.069	

N of Cases = 91

Correlation, Covariance, 1-tailed Sig, Cross-Product:

	XEVALOB	O_CHA	O_INS	O_ENA	O_MOD	O_ENC
XEVALOB	1.000	.627	.640	.629	.594	.623
	.091	.541	.643	.587	.565	.627
	.999	.000	.000	.000	.000	.000
	8.232	48.680	57.890	52.805	50.819	56.446
O_CHA	.627	1.000	.884	.607	.709	.702
	.541	8.133	8.376	5.333	6.351	6.656
	.000	.999	.000	.000	.000	.000
	48.680	731.939	753.799	480.009	571.557	599.024
O_INS	.640	.884	1.000	.674	.734	.748
	.643	8.376	11.041	6.904	7.667	8.270
	.000	.000	.999	.000	.000	.000
	57.890	753.799	993.646	621.364	690.003	744.258
O_ENA	.629	.607	.674	1.000	.690	.695
	.587	5.333	6.904	9.500	6.682	7.123
	.000	.000	.000	.999	.000	.000
	52.805	480.009	621.364	854.974	601.409	641.049
O_MOD	.594	.709	.734	.690	1.000	.703
	.565	6.351	7.667	6.682	9.869	7.351
	.000	.000	.000	.000	.999	.000
	50.819	571.557	690.003	601.409	888.222	661.578
O_ENC	.623	.702	.748	.695	.703	1.000
	.627	6.656	8.270	7.123	7.351	11.069
	.000	.000	.000	.000	.000	.999
	56.446	599.024	744.258	641.049	661.578	996.199

Table 10

Leadership Effectiveness vs. Each of Five Behaviours

Beginning Block Number 1. Method: Stepwise

Variable(s) Entered on Step Number 1.. O_INS

Multiple R	.64009
R Square	.40971
Adjusted R Square	.40308
Standard Error	.23366

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	3.37264	3.37264
Residual	89	4.85915	.05460

F = 61.77314 Signif F = .0000

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
O_INS	.058260	.007413	.640085	7.860	.0000
(Constant)	2.466450	.155316		15.880	.0000

Variables not in the Equation

Variable	Beta In	Partial	Min Toler	T	Sig T
O_CHA	.280600	.170806	.218724	1.626	.1075
O_ENA	.362825	.346797	.545528	3.491	.0008
O_MOD	.269670	.238198	.460553	2.301	.0238
O_ENC	.328118	.283417	.440411	2.772	.0068

. . . . . .

Variable(s) Entered on Step Number 2.. O_ENA

Multiple R	.69392
R Square	.48152
Adjusted R Square	.46974
Standard Error	.22023

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	3.96380	1.98190
Residual	88	4.26799	.04850

F = 40.86403 Signif F = .0000

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
O_INS	.035997	.009459	.395488	3.806	.0003
O_ENA	.035601	.010197	.362825	3.491	.0008
(Constant)	2.094229	.181096		11.564	.0000

Variables not in the Equation

Variable	Beta In	Partial	Min Toler	T	Sig T
O_CHA	.262763	.170581	.188666	1.615	.1100
O_MOD	.136749	.118732	.390855	1.115	.2678
O_ENC	.201746	.171351	.374019	1.622	.1064

Using raw scores or B scores the full regression equation would be:

$$Y = .036\ (O\text{-}Ins) + .036\ (O\text{-}Ena) + 2.094$$

where 2.094 is the regression constant.

Summary

The analysis of the data revealed that there are effective schools in the province of Saskatchewan. An analysis of variance showed no significant differences between the various school types based on the principals' mean scores on the effectiveness survey and also no significant differences in the observers'/teachers' mean scores.

When a combined score of the principals and observers was compared between the five school types, significant differences were found between the rural elementary and rural high schools, as well as, between the rural elementary and the rural K-12 schools.

There are differences in the behaviours of principals in effective and noneffective schools. The leadership behaviours identified by the LPI-S were found in the various schools in Saskatchewan and the differences in perceptions of these behaviours between principals and

observers/teachers were similar to those differences found by Kouzes and Posner in their previous studies between leaders and others outside of the school setting.

The question as to whether there was a significant difference between the leadership behaviours of principals as identified by the LPI-S and the LPI-O in the three types of rural schools (elementary, high, and K-12) was also addressed. In each case where the perceptions of the principal and the observers were examined under each of the five behaviours, there was no significant difference.

In a similar examination of the two types of urban schools (elementary and high) it was found that there was a significant difference in two variables: the principal's perception of inspiring the vision and the average of the principal's total perceptions. The other variables examined for urban schools had no significant differences.

Using a regression analysis on the responses from the LPI-O, the relationship between leaders' effectiveness and their behaviour as measured on the LPI-O was assessed using leader effectiveness as the dependent variable and the five behavioral practices as independent variables. It was found that two variables, inspiring a shared vision and enabling others to act, accounted for approximately

50% of the variance in effectiveness.

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to compare the behaviours of rural school principals as perceived by themselves and as perceived by their fellow workers. This study also examined principals' behaviours and their relationship to the effectiveness of the individual schools involved in the study. It was also proposed to look at the behaviours of rural school principals to see if there was any continuity within the various school structures: elementary, high school, or kindergarten to grade twelve; and to see if the behaviours were congruent with those exhibited by urban principals.

This chapter will summarize the findings from the statistical analysis by answering the four research questions:

1. Are there significant differences in the behaviours of principals in schools that have been identified as effective compared to those principals in schools that have not been identified as effective?

2. Are the leadership behaviours as identified by the Leadership Practices Inventory Self and Other (LPI-self and LPI-other) found in various schools in Saskatchewan?

3. Are there differences in the principals' perceptions of their leadership behaviour as identified by the LPI-S and those perceptions of other staff members as indicated on the LPI-O?

4. Are there significant differences between the leadership behaviours of principals as identified by the LPI-S and the LPI-O in:

a. Rural and urban schools?

b. The three types of rural schools (elementary, high and K-12)?

c. The two types of urban schools (elementary and high)?

Conclusions will then be drawn and implications for practitioners and policy makers will be presented in conjunction with areas of possible future study.

Research Question # 1

Are there significant differences in the behaviours of principals in schools that have been identified as effective compared to those principals in schools that have not been identified as effective?

Based on the analysis of the data it was found that there is a significant difference in the behaviours of principals in schools that are identified as effective compared to those behaviours of principals in schools that have not been identified as effective. This significance was found in the perceptions of all three groups: principals, observers, and combined principals and observers.

When the principal's perceptions were used the behaviour of Inspiring a Shared Vision was found to be significantly different. This may be because all principals feel that they demonstrate their vision of what the school should be like; however, when the observers' perceptions were analyzed, it appears that there is no significant difference between effective and ineffective schools in the perception of the vision. As Chrispeels (1990, p. 19) in her discussion of the differences between effective and ineffective schools stated, "all of the schools had a written mission statement ... however ... not all staff members shared the vision, and in some cases, they were unable to articulate the mission." Chrispeels went on to conclude that "in the most effective schools, teachers clearly understood, shared, and could articulate the mission of the school." This appears to be the case in Saskatchewan, in that the behaviour of the

principal to inspire the vision is perceived to be significantly different in effective schools by the principals and teachers combined.

It is very likely that this perception of principal's behaviour is due to the internalization of the school/principal's vision.

The teachers/observers alone perceived differences among principals in the behaviour of challenging the process. This behaviour like vision is linked to a commitment to change. If a staff does believe in the goal or vision, then it is likely that they will be committed to change and will therefore view any challenge to the process as being positive or the perception would be one that principals were seen as being in favour of change.

Based on the responses from the observers alone and a regression analysis to develop an equation to predict the effectiveness of the leader based on the school's effectiveness, it was found that approximately 50% of the variance between leaders in the schools could be traced to two behavioral variables: Inspiring a shared vision and Enabling others to act.

According to Roger Harrison (1985) the "new age leader" is both visionary and steward. Visionary in forging the dream and in keeping the flame alight, and steward in caring and nurturing the organization and its

human parts. (p. 129)

Kouzes and Posner (1987) said

> exemplary leaders enlist the support and assistance of all those who must make the project work. They involve those who must live with the results, and they make it possible for others to do good work. They encourage collaboration, build teams, and empower others. They enable others to act. (p. 10)

Based on their data of others' perceptions of leaders behaviours, Kouzes and Posner indicated that enabling others to act was the most significant of all the five behavioral practices. (p. 10)

In the Leadership Factor, John Kotter (1988) echoed these findings when he said that effective leadership at any level shares some fundamentals in common: a good vision and a strategy backed up by sufficient teamwork and motivation; in other words a shared vision and enabling others to act.

In conclusion, using the leadership behaviours as identified by Kouzes and Posner from exemplary businesses it was found that there is a significant difference in the leadership behaviours of principals in effective schools and those behaviours of principals in schools not designated as effective. These behaviours as identified by Kouzes and Posner (1987) were:

> Challenging the process which involves searching for opportunities to make changes, experimenting and taking risks.

> Inspiring a shared vision of the future which is positive and enlists the support of others through genuineness and skillful communications.
>
> Enabling others to act in a relationship based on mutual trust which stresses collaborative goals and actively involves others in planning.
>
> Modelling the way involves behaving in a way that is consistent with the values and beliefs presented while providing opportunities for projects to be broken down so that achievement is possible.
>
> Encouraging the heart involves recognizing others contributions and celebrating their accomplishments. (p.14)

This study found that two of the behaviours, Inspiring a Vision and Enabling Others to Act, accounted for approximately 50% of the variance in effectiveness.

Research Question # 2

Are the leadership behaviours as identified by the Leadership Practices Inventory Self and Other found in the various schools in Saskatchewan?

The behaviours as identified by Kouzes and Posner were found in the various schools in Saskatchewan and the results parallel those of Kouzes and Posner in that the observers' scores were lower than the principals' (leaders'). This agrees with Hostetler (1984) who found

that there was a significant relationship between the behaviours of principals and leaders in excellent companies as identified by Peters and Waterman (1982).

There were also parallel perceptions between the principals and observers in that both groups scored the behaviour of Challenging the process low while the behaviours Inspiring a shared vision, Modelling the way and Encouraging the heart were scored high.

Challenging the process may have been scored as the lowest by both principals and observers since they do not see this as that vital because the processes or ways of doing things seems to be always changing.

> The world has become increasingly dynamic resulting from the information explosion and worldwide communication. This dynamic complexity means organizations cannot remain stable for very long. Rather, constant change on the outside requires constant change on the inside. (Kilmann, 1985, p. 2)

Change is a process not an event and "teachers want and need to participate in planning for and decision making about implementation not adoption" (Clark, Lotto & Astuto, 1984, p. 51). Thus encouragement from a leader is important and if perceived will be perceived as important as it was in Saskatchewan schools.

Vision has been defined as what can and should be (Chrispeels, 1990, p. 39). Thus when discussing vision or inspiring a shared vision there has to be a commitment to change and this was seen within the schools in

Saskatchewan. The principals, particularly in the effective schools, were seen as modelling this commitment to the vision. Chrispeels in her study found that principals in effective schools modelled their vision; for example if the principal believed in frequent monitoring, then the principal was seen in classrooms monitoring the instructional program.

It appears that principals and teachers in Saskatchewan agree with Fullan et al. (1990) when they stated that instructional leadership is a shared concept, "leadership must be mobilized on multiple fronts for long term development to occur" (p. 16). Principals do not lead by themselves; they nurture leadership in others, thus modelling the way they want others to behave.

In conclusion the leadership behaviours as identified by Kouzes and Posner in exemplary companies were found in the various schools in Saskatchewan and the perceptions of the principals and the teachers/observers were similar in that they scored the behaviour Challenging the process the lowest while scoring the behaviours Inspiring a shared vision, Modeling the way and Encouraging the heart high.

Research Question # 3

Are there differences in the principals' perceptions of their leadership behaviours as identified by the LPI-S

and those perceptions of the other staff members as indicated on the LPI-O?

To say that there are no differences in the perceptions of teachers and principals would not be truly meaningful. There are definitely differences between the perceptions of the two and these differences are in line with those of Kouzes and Posner. What is more meaningful, however, is that there is a significant relationship between the observers' rating on the five behavioral scales and the principals' rating. There is also a significant relationship between each behaviour as rated by the principal and the observers. Therefore, it should be concluded that even though there are differences in the perceptions these perceptions are in line with what has been found in other leadership studies, such as that of Kouzes and Posner, and should form the basis for future work in the study of principal leadership.

There is a difference in the perception of whether or not a school is effective. Teachers' perceptions were significantly different from those of principals. Principals viewed more schools as effective than did teachers. The Saskatchewan School Improvement Program in its report on twelve pilot schools in 1986-87 found that teachers were harder on themselves and their schools than were other interested observers.

In this study there were significant differences between urban and rural schools, with regard to effectiveness as based on teachers' perceptions. The teachers perceived that almost one-quarter of the rural schools were effective while they viewed only 7% of the urban schools as effective. This difference seems to reflect a feeling that there is strength in the smaller rural schools within the province.

Chrispeels (1990) found that it was possible to develop an interactive model of school effectiveness components. This model was comprised of five parts: instructional leadership, student outcomes, school climate and culture, curriculum and instructional practices, and school organizational structure and procedures. Chrispeels stated that the model seemed to "capture the essential dimensions of school life that need to be addressed in achieving and sustaining increased effectiveness" (p. 43). The strengths of Saskatchewan Rural Schools were presented in Rural Education: Options for the 80's A discussion paper prepared by Saskatchewan Education (February, 1981). These strengths were:

> In small schools, the teacher knows each child as an individual and can make special provisions for special needs and talents.
>
> Small schools, like small groups, are also easier to manage. The administrative policy decisions that absorb endless time and energy in large schools do not exist in smaller

> settings.
>
> Rural schools provide a kind of heterogeneity rarely found in urban or suburban settings--heterogeneity of social class.
>
> The entire community is involved in the school.
>
> It compels the different social groups in the rural community to come to terms with one another at an early age and on a comparatively equal basis.
>
> More students participated in more extra-curricular activities in small schools than in large ones and more students felt critically important to the success of their group activities.
>
> Participation is an important educative tool in its own right. In the community-involved rural schools, it can become a solid basis for the development of self-esteem. (p.29)

These strengths seem to parallel the essential dimensions of school life as addressed by Chrispeels. Faith Dunne (1977) in her article "Choosing Smallness" reported that some of the major problems of small rural schools were the inverse of their virtues, for example, high school options. The message was clear from her studies that many small rural schools provide excellent educational situations which large schools cannot duplicate. This appears to be the case in Saskatchewan where rural schools were seen as more effective than urban schools.

Based on principals' perceptions and using the conservative Scheffe procedure there were no significant

differences between any two of the five types of schools in Saskatchewan. The Scheffe method also found no significant differences between any two school types using observers' perceptions.

When the mean scores of both the observers and the principals were used, significant differences in the rating of effectiveness between rural elementary and rural high schools and between rural elementary and K-12 school were found. Rural elementary schools were perceived as being less effective and K-12 schools were seen as being the most effective rural schools. This was true from the teachers' perspective and from a combined teachers'/principal's perspective. From a principal's perspective rural high schools were seen as the least effective school. This may be a result of the curricular demands that are placed on rural high schools. The problem is that since the Department of Education and School Division policies place top priority on post-secondary entrance academic programs, other possible options are provided last and are the first to be deleted. One effect of this practice is that parents and students view these non-academic programs as second-rate, such that the programs are not heavily enrolled. The irony is that the majority of students are enrolled in the academic post-secondary entrance programs when, in fact, only about

30% of the grade 12 students go on to post-secondary training (22% to university, and 8% to technical institutes). (Department of Education, 1990)

Although the value of the academic subjects is not in question, the emphasis on these subjects at the expense of 70% of the student population for whom they are less than necessary is inappropriate. There exists both a structural and psychological barrier to schools providing non-academic programs and to students opting for them. Structural barriers involve the number of teachers on staff, their training, the number of students and the school facilities. In many ways the graduation requirements in the province are non-restrictive, setting out only a few courses as compulsory. However, the requirements are restrictive in the sense that they directly place priority on post-secondary preparatory programs and place little emphasis on any of the practice-oriented courses. Most schools are able to provide those courses that are either compulsory or in the compulsory areas, but few rural schools can provide the electives that students may need.

Another problem for rural schools in delivering a quality program is the availability of qualified staff. Rural areas frequently encounter difficulties in employing specialized staff.

These situations may cause principals to perceive their schools as not meeting the needs of their students and thus the rural high school principals may feel that their schools are less effective than they could be.

Teachers do not see urban schools as effective; however, six times more principals see urban schools as effective than do the teachers. This may be another area for future study. A possible explanation is the different cultures of the urban schools and the traditional roles of the elementary and high schools. Schools have strong cultures because of the enduring practices that persist in schools even if they have long ceased to be effective and in large bureaucracies like urban school divisions these practices are embedded deeply into the system.

The urban schools also serve a much more diverse constituency which has multiple purposes for its schools. The school is torn between diverse roles and expectations which make it difficult for the school to develop a shared vision and sense of purpose. Urban schools within the province of Saskatchewan also transfer teachers and principals more frequently than do the rural school divisions thus creating an internal school community that is in state of flux. For example, in Saskatoon (the largest city in the province) principals on average are in a school no more than five years which means that the

school's vision changes constantly with changes in principals and teachers. Thus from an observer/teacher perspective the effectiveness of the school tends to be less.

In conclusion Saskatchewan Schools be they rural or urban, elementary or high or K-12 may be effective. The perception of effectiveness varies with the individuals and their particular orientation. However, it should be concluded from this study that rural K-12 schools are perceived to be the most effective and that urban schools from a teachers' perspective are not effective.

Research Question # 4

Are there differences between the leadership behaviours of principals as identified by the LPI-S and LPI-O in:

a. Rural and urban schools?
b. The three types of rural schools (elementary, high and K-12)?
c. The two types of urban schools (elementary and high)?

Based on the findings of this study there are no significant differences between the leadership behaviours of principals as identified by the LPI-S and the LPI-O in rural and urban schools. This is true both from a

principal's and observers'/teachers' perspective.

Kouzes and Posner (1987) found that on the scores from the Leadership Practices Inventory there were no significant differences between public-sector and private-sector administrators nor were there any differences found when cross-cultural comparisons were made between American, European and Australian middle-managers. Thus the findings of this study correlate with previous findings. Any differences in the behaviours of principals in rural and urban schools may be associated then as Ward (1988) said due to "a school problem" or expectation.

With regard to the three types of rural schools (elementary, high and K-12) there is no significant difference in the leadership behaviours of principals as identified by the LPI-S and LPI-O. The behaviours were similar in all rural schools which again paralleled Kouzes and Posner's findings between branches of the same companies.

When the two types of urban schools (elementary and high) were examined to see if there was a significant difference in the leadership behaviours it was discovered that the principals themselves see a significant difference in the variable Inspiring the shared vision and as well there was a significant difference in the mean of the five variables (Challenging the process, Inspiring a

shared vision, Enabling others to act, Modeling the way and Encouraging the heart).

This difference may be similar to the results Kouzes and Posner found in their study of European companies. They found that there were no significant differences between continents (similar to rural and urban schools); however, there were differences within the European samples (similar to the urban samples in this study). It was found that in Europe the differences were consistent with cultural norms for their countries. The differences found in this study between urban principals (elementary and high school) may similarly be a result of cultural differences associated with the type of schools. For example, in urban high schools the principals generally do not teach and are full time administrators; whereas, in the elementary schools most principals do some teaching and may be seen more as a team player involved in shared leadership, encouraging others to take a more active role in projects simply due to a time factor. High school principals in Saskatchewan are generally dealing with more teachers, students and many more course options that need to be managed and thus there is less time to act as the "instructional leader."

In conclusion the only difference between leadership behaviours of principals in the various school types

occurred at the urban level where there is a significant difference between high school and elementary principals' perceptions of their behaviours. There was also a significant difference in how the principals in the urban setting see themselves inspiring others. There were no other differences found among urban principals' perceptions and there were no significant differences as identified by the observers through the LPI-O.

Conclusions

In summary the following conclusions are made based on the findings of this study:

1. The leadership behaviours as identified by Kouzes and Posner are present in Saskatchewan Schools and the perceptions of these behaviours by leaders and observers are in line with what Kouzes and Posner had found in other organizations. While there are differences in perceptions of leadership behaviours between observers and leaders, there is a significant positive correlation between these perceptions.

2. Based on the perceptions of the observers/teachers there are significant differences in the behaviours of principals in effective schools compared to those behaviours of principals in schools that are not as effective. Almost 50% of this difference can be explained

by differences in the leadership behaviours of Inspiring a shared vision and Enabling others to act.

3. There are no differences in the behaviours of principals in the various types of schools (rural or urban; high schools, elementary schools or K-12 schools).

4. Rural K-12 schools are viewed by teachers as being the most effective while urban teachers do not see their schools as effective.

5. Principals view their schools as effective more so than the teachers.

Recommendations:

Based on the findings in this study the following recommendations are made to practitioners and policy makers.

1. School effectiveness can be improved and needs to be recognized as encompassing many essential dimensions of school life. These elements need to be studied and implemented wherever possible. Achievement of goals can only be achieved through positive interaction of a number of components. One of these is leadership. It is recommended that all principals be educated through universities or inservice as to what the components of school effectiveness are and what the components of leadership are. The five leadership behaviours of Kouzes

and Posner would make an excellent starting point for such an educational program. Principals need to be encouraged to exhibit these behaviours.

2. There is a need to recognize that increasing a school's effectiveness is an ongoing and a long term process that cannot be accomplished within a short time frame. School Divisions need to recognize that education is necessary to carry out any school effectiveness program and such a program will take time and money. If the Divisions want their schools to become more effective, then they will have to assist in the process rather than hinder it.

3. Principals should be encouraged to expound on their vision and to inspire colleagues and communities to incorporate this vision. Principals need to involve other staff members or at the least encourage them to try new ideas. At the school site as found by Hord, Stiegelbauer and Hall (1984) effective schools are not led by principals themselves. There are often more change agents who play critical roles. Andrews (1987) found that principals who are perceived as strong leaders were active in encouraging others, especially teachers.

4. School staffs need to be involved in staff development programs that deal with all aspects of school effectiveness, especially those that deal with leadership

behaviours in order to encourage and develop their leadership development.

Therefore in conclusion it is recommended that programs be established that are practical in nature that allow for principals to be involved in the following:

1. the identification of leadership behaviours;
2. the study of and practice of these behaviours;
3. the establishment of mentors for principals;
4. the monitoring of growth of principals for developmental purposes.

It is also recommended that principals be hired whose potential leadership behaviours can be developed and who recognize the need of these behaviours and the role of such in the development of effective schools and effective staffs.

Suggestions for Further Study

The following are possible areas that may be examined in future studies:

1. Why do urban teachers not see their schools as effective?
2. Why are Rural K-12 schools seen as the most effective and how can this knowledge be implemented into other schools?
3. Since principal behaviour has such an impact on

the effectiveness of a school, what is the optimum length of time a principal should stay in one school? Does the effectiveness of a principal in a school parallel the biological life of the school with its stages of development?

4. Is there a relationship between the size of a school and its effectiveness?

The concepts of school improvement and school effectiveness are not new. Previous research into effective schools and the school improvement process has shown that the principal is an important player. This study has shown that the behaviours of the principal play a large role in determining whether or not a school is effective. This study has also shown that there are no differences in the behaviours of principals whether they are principals in urban or rural schools. It was also discovered that the Rural K-12 school is the most effective school in Saskatchewan. This study has also compared the behaviours of principals in the urban and rural areas and thus has provided more knowledge about rural schools and rural school effectiveness, an area that has been lacking in the past.

The findings and the recommendations presented along

with the areas of possible study provide a further basis of knowledge for the development of educational programs which can focus on the aspects of leadership necessary for schools to improve and provide the best possible educational experience for our students.

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Appendix A

Leadership Practices Inventory (LPI): Self

Appendix B

Leadership Practices Inventory Other (LPI-O)

Appendix C

The San Diego County Office of Education Effective Schools Survey

Appendix D

Authorization to Use Leadership Practices Inventory

KOUZES POSNER INTERNATIONAL, INC.
2330 Forbes Avenue, Suite A
Santa Clara, California 95050

June 8, 1988

Mr. Ronald Wayne Brice
10136 Caminito Zar
San Diego, California 92128

Dear Ron:

Thank you for your correspondence of May 31 requesting permission to use the Leadership Practices Inventory (LPI) in your doctoral dissertation. We are pleased to allow you to make copies of the LPI in your research studies to the extent outlined in your proposal and according to the following two stipulations:

1. That the following copyright notice appear on all copies of the LPI-Self and LPI-Other: "Copyright 1988. James M. Kouzes and Barry Z. Posner. Used with permission."

2. That we receive copies of <u>all</u> reports, papers, articles, including your dissertation itself, etc. which make use of the LPI data.

In addition, we would appreciate receiving an update from you in six months about the status of your project. If you agree to the terms outlined in this letter, you should sign one copy and return it in the enclosed envelope. Also please include an address and phone number (if available) for you in Saskatchewan.

Finally, if we can be of any assistance please do not hesitate to let us know. Best wishes in your research efforts.

Cordially,

Barry Z. Posner, Ph.D.
Managing Director

I agree to abide by these terms:

_____ Date: July 10/88

Appendix E

Variables Used in Tables

Table E-1

ron variables

Variables used in Tables

	A	B	C	D	E	F
1	Ron Brice Dissertation, 2/5/90					
2	(Notes by P. Anderson, Academic Computing, 619.260.4810)					
3						
4	QL_101	type of school as queried on principal's questionnaire				
5	QL_102	public or private				
6	QL_103	principal tenure				
7	QL_104	principal age				
8	QL_105	principal sex				
9	QL_106	principal educational level				
10	Tenure_r	mean tenure observers				
11	Age_r	mean age observers				
12	Sex_r	mean sex observers				
13	Educ_r	mean educational level observers				
14	Posit_r	mean position observers				
15	Ql_eval	mean of 70 items on principal's evaluation				
16	Q1_eval	mean of 70 items on 1st observer's evaluation				
17	Q2_eval	mean of 70 items on 2nd observer's evaluation				
18	Q3_eval	mean of 70 items on 3rd observer's evaluation				
19	Q4_eval	mean of 70 items on 4th observer's evaluation				
20	Q5_eval	mean of 70 items on 5th observer's evaluation				
21	Xevalob	mean of 70 items on observers' evaluation				
22	Xeval	mean of 70 items on principal's and observers' evaluation				
23	Class	normed items classification using mean of principal and observers				
24	Classl	normed items classification using mean of principal's evaluation				
25	Classo	normed items classification using mean of observers' evaluation				
26	S_cha	Sum of lpi self challenge items				
27	S_ins	Sum of lpi self inspire items				
28	S_ena	Sum of lpi self enable items				
29	S_mod	Sum of lpi self model items				
30	S_enc	Sum of lpi self encourage items				
31	Oa_cha	Sum of lpi 1st other challenge items				
32	Oa_ins	Sum of lpi 1st other inspire items				
33	Oa_ena	Sum of lpi 1st other enable items				
34	Oa_mod	Sum of lpi 1st other model items				
35	Oa_enc	Sum of lpi 1st other encourage items				
36	Ob_cha	Sum of lpi 2nd other challenge items				
37	Ob_ins	Sum of lpi 2nd other inspire items				
38	Ob_ena	Sum of lpi 2nd other enable items				
39	Ob_mod	Sum of lpi 2nd other model items				
40	Ob_enc	Sum of lpi 2nd other encourage items				
41	Oc_cha	Sum of lpi 3rd other challenge items				
42	Oc_ins	Sum of lpi 3rd other inspire items				
43	Oc_ena	Sum of lpi 3rd other enable items				
44	Oc_mod	Sum of lpi 3rd other model items				
45	Oc_enc	Sum of lpi 3rd other encourage items				
46	Od_cha	Sum of lpi 4th other challenge items				
47	Od_ins	Sum of lpi 4th other inspire items				

ron variables

	A	B	C	D	E	F
48	Od_ena	Sum of lpi 4th other enable items				
49	Od_mod	Sum of lpi 4th other model items				
50	Od_enc	Sum of lpi 4th other encourage items				
51	Oe_cha	Sum of lpi 5th other challenge items				
52	Oe_ins	Sum of lpi 5th other inspire items				
53	Oe_ena	Sum of lpi 5th other enable items				
54	Oe_mod	Sum of lpi 5th other model items				
55	Oe_enc	Sum of lpi 5th other encourage items				
56	O_cha	Mean of observers' ratings for challenge				
57	O_ins	Mean of observers' ratings for inspire				
58	O_ena	Mean of observers' ratings for enable				
59	O_mod	Mean of observers' ratings for model				
60	O_enc	Mean of observers' ratings for encourage				
61	Linear_o	Mean of observers' averages for 5 scales				
62	Linear_s	Mean of principal's averages for 5 scales				
63	Challeng	recoded s_cha into high, moderate and low categories				
64	Inspire	recoded s_ins into high, moderate and low categories				
65	Enable	recoded s_ena into high, moderate and low categories				
66	Model	recoded s_mod into high, moderate and low categories				
67	Encour	recoded s_enc into high, moderate and low categories				
68	Xclass	recode class into effective versus average or ineffective				
69	Xclassl	recode classl into effective versus average or ineffective				
70	Xclasso	recode classo into effective versus average or ineffective				
71	Xtype	recode sch_type into rural and urban				
72	Rural	recode sch_type into rural				
73	Urban	recode sch_type into urban				

Appendix F

Figure 1: Leadership Practices Inventory -- Self: Percentile Ranking

PERCENTILE	CHALLENGING	INSPIRING	ENABLING	MODELING	ENCOURAGING
High 99%	30	30	30	30	30
	29	29		29	
	28	28	29	28	29
		27			
	27	26		27	
90%			28		28
		25		26	
	26				27
			27		
80%					26
		24		25	
	25				
					25
Moderate 70%		23	26	24	
	24				24
		22			
60%					
			25	23	23
50%	23	21			
					22
		20	24	22	
40%					
	22				21
		19			
Low 30%				21	
			23		
	21	18			20
20%				20	
	20	17	22		19
		16		19	
	19		21		18
10%		15		18	17
	18	14	20		
	17	13		17	16
	16	12	19	16	15

Source: Kouzes and Posner, 1987, p.15.

Figure 1

Appendix G

Letter of Introduction

October 13, 1988

Dear fellow principal;

My name is Ron Brice. My current position is principal of Asquith School, a K-12 school 34 km. west of Saskatoon. I am at the dissertation phase of completing my Doctorate of Leadership from the University of San Diego. In my dissertation I am seeking to learn about the leadership behaviors of Saskatchewan Principals and how that relates to school effectiveness.

Your assistance is necessary in order to research this topic. What I require from you and five (5) randomly selected staff members, is to complete a questionnaire that takes from 20 to 30 minutes. The questionnaire examines your leadership behaviors and addresses the effectiveness of your school. Once the information is collected, it will be pooled to insure anonymity. Your school has been randomly selected and included in a sample that is comprised of 130 Saskatchewan schools representing both rural and urban schools at the elementary, secondary, and K-12 levels.

In order to validate the research it is necessary that you have been in your present position as principal for at least one year and that the teachers selected have worked with you for a minimum of one year. If your situation does not meet these requirements, or you do not wish to be involved in this research, please return this letter indicating the reason for not participating to:

Ron Brice
Asquith School
Box 40
Asquith, Sask. S0K 0J0

If I do not hear from you by Nov. 21/88, I will assume you have agreed to participate in this study, and I will send the questionnaires to you.

Thank you for your cooperation.

Yours truly.

Ron Brice

School will not be able to participate in this research project because:

Appendix H

Identification of Schools as Effective, Average, or Non-effective Based Upon Discriminant Analysis

The following is an output of a SPSS-X run using discriminant analysis. There are three columns of numbers. To identify, a school as a 1 (effective), you need to construct two equations. The first equation should be

COMPUTE GROUPA=-7.99906(Q1)-6.92035(Q2) +11.8876(Q3) +3.03206(Q4) +13.5267(Q5) +4.4729(Q6) + ETC. (to the end of the variables).

The second would be:

IF (GROUPA LT 1.5), GROUP=1

To define, a school as average, the two equations should be:

COMPUTE GROUPB=-9.43544(Q1)-8.05962(Q2)+11.8909(Q3)+ETC...

IF (GROUPB GE 1.5) OR (GROUP B LT 2.5), GROUP=2

To define a school as ineffective, the equation should be:

COMPUTE GROUPC=-10.2506(Q1)-8.09512(Q2)+13.93119(Q3)+ETC...

IF (GROUPC GT 2.5)GROUP=3

The three if statements will then divide the schools inot three groups, with one group having a value of 1 in the GROUP variable, the second having a 2 in the GROUP variable, and the third having a 3 in the GROUP variable.

9-APR-88 SPSS-X Release 2.2+ For VAX/VMS
21:18:41 SAN DIEGO STATE UNIVERSITY DEC VAX-11/780
VMS V4.5

ON GROUPS DEFINED BY GROUP

ANALYSIS NUMBER 1

DIRECT METHOD: ALL VARIABLES PASSING THE TOLERANCE TEST ARE ENTERED.
MININUM TOLERANCE LEVEL..... 0.00100
CANONICAL DISCRIMINANT FUNCTIONS
MAXIMUM NUMBER OF FUNCTIONS..... 2
MINIMUM CUMULATIVE PERCENT OF VARIANCE... 100.00
MAXIMUM SIGNIFICANCE OF WILK'S LAMBDA... 1.0000

PRIORR PROBABILITY FOR EACH GROUP IS 0.33333

CLASSIFICATION FUNCTION COEFFICIENTS
(FISHER'S LINEAR DISCRIMINANT FUNCTIONS)

GROUP =	1	2	3
Q1	-7.999058	-9.435435	-10.25057
Q2	-6.920350	-8.059617	-8.095120
Q3	11.88762	11.89093	13.93119
Q4	3.032059	3.014915	3.907777
Q5	13.52671	15.18784	13.96542
Q6	4.472990	4.723088	4.229069
Q7	3.412543	1.926122	0.427548
Q8	8.243429	6.974933	7.644850
Q9	10.77728	14.73506	16.29085
Q10	-6.777494	-6.532049	-8.366877
Q11	-9.929262	-8.368560	-11.33198
Q12	22.27381	23.96968	22.48936
Q13	1.188957	2.573566	2.382931
Q14	-3.776453	-4.804536	-5.332006
Q15	10.11785	8.661339	3.906774
Q16	-1.054089	-4.193704	-1.617724
Q17	10.28907	10.53227	10.01891
Q18	8.502923	16.41984	18.87486
Q19	-5.119974	-7.689493	-5.296574
Q20	-7.152674	-8.517305	-9.021382
Q21	-5.392881	-0.971384	-1.159512
Q22	7.775906	9.776091	10.14545
Q23	-2.301299	-3.959680	-3.076641
Q24	-10.57286	-13.52088	-12.46717
Q25	7.553125	6.643820	5.540632
Q26	-11.87923	-7.966447	-9.902396
Q27	-35.51007	-36.57861	-34.91501
Q28	-9.664685	-8.900143	-7.137035
Q29	18.15119	14.10069	16.88252

Q30	8.348993	8.130546	8.458444
Q31	2.270649	2.198020	2.423250
Q32	-0.335478	-1.442728	-1.480876
Q33	11.40899	12.12155	12.80465
Q34	-8.556410	-10.00708	-7.776599
Q35	11.02421	12.91098	13.87391
Q36	-25.62672	-24.12472	-25.16360
Q37	6.646391	8.606679	10.06125
Q38	21.17621	22.20047	24.52820
Q39	11.12088	14.04775	13.29783
Q40	8.086492	4.775753	2.630552
Q41	1.628509	0.744985	-6.824821
Q42	7.831912	8.622032	14.72385
Q43	-10.86789	-11.87074	-9.518198
Q44	-6.248744	-5.379704	-6.982586
Q45	-12.65946	-13.67929	-14.21263
Q46	19.87654	20.07636	21.06185
Q47	-2.054021	-1.904466	-1.232820
Q48	-7.715336	-12.72199	-12.59497
Q49	-7.882820	-9.063011	-11.10191
Q50	5.013469	5.924939	5.474757
Q51	-9.598490	-7.618604	-8.526360
Q52	1.949898	-0.539855	-1.195593
Q53	5.786085	8.163401	9.733474
Q54	-5.072735	1.533340	4.276687
Q55	10.05333	9.538770	13.46445
Q56	-4.216868	-5.032312	-8.023668
Q57	5.405391	5.994241	8.161500
Q58	24.70351	27.18180	29.61654
Q59	10.37710	11.57441	9.929479
Q60	2.526807	6.237451	3.737472
Q61	18.03389	15.76005	13.09072
Q62	1.820127	1.280594	2.175554
Q63	-14.01899	-15.26353	-15.07991
Q64	17.33404	13.62233	11.80567
Q65	0.617053	1.390672	2.682810
Q66	6.452217	7.028271	6.029219
Q67	-4.468129	-4.619490	-4.811919
Q68	15.08773	11.49168	12.15654
Q69	7.034110	6.871224	7.308127
Q70	1.926655	-0.681204	-3.426892
(CONSTANT)	-262.2411	-274.8177	-286.9574

APPENDIX I

Descriptive Statistics for Selected Survey Variables

Name of Variable	N Valid Cases	Mean	Std. Dev.	Min.	Max.
Overall					
ESS*:Principal	90	3.81	.50	1.36	4.41
ESS:Observers (Composite)	91	3.67	.30	2.63	4.25
ESS:Principal & Observer	91	3.69	.28	2.79	4.26
Rural					
ESS*:Principal	61	3.78	.42	2.74	4.30
ESS:Observers(Composite)	62	3.65	.29	2.84	4.13
ESS:Principal & Observer	62	3.68	.27	3.01	4.08
Urban					
ESS*:Principal	29	3.79	.37	2.70	4.27
ESS:Observers(Composite)	29	3.70	.27	3.12	4.07
ESS:Principal & Observers	29	3.73	.26	3.11	4.05
OVERALL					
LPI-Self					
Challenge	90	21.79	3.76	11.29	28.64
Inspire	90	21.06	3.89	10.64	28.00
Model	90	23.09	3.44	11.20	29.00
Enable	90	24.97	3.41	12.64	30.00
Encourage	90	22.59	4.02	9.58	29.36
LPI-Other					
Challenge	91	21.29	2.80	13.23	26.59
Inspire	91	20.69	3.27	13.10	27.11
Model	91	22.46	3.15	14.69	27.86
Enable	91	23.39	3.08	13.40	28.35
Encourage	91	22.11	3.31	14.67	27.56
Average for 5 LPI-S items:					
Principal	90	22.70	2.95	13.15	27.44
Average for 5 LPI-O items:					
Observers	91	21.99	2.74	15.18	27.02
RURAL					
LPI-Self					
Challenge	61	21.39	3.82	10.00	28.00
Inspire	61	20.70	3.69	10.00	28.00
Model	61	22.80	3.43	10.00	29.00
Enable	61	24.82	3.06	12.00	30.00
Encourage	61	22.43	4.10	7.00	30.00
LPI-Other					
Challenge	62	20.92	2.91	12.50	26.40
Inspire	62	20.28	3.49	11.75	27.40
Model	62	22.37	3.20	13.80	27.80
Enable	62	23.23	3.21	12.00	28.60
Encourage	62	21.77	3.24	14.80	26.80
Average for 5 LPI-S items:					
Principal	61	22.43	2.84	11.80	26.80

Average for 5 LPI-O items:					
Observers	62	21.71	2.81	14.96	27.12
URBAN					
LPI-Self					
Challenge	29	22.62	3.64	14.00	30.00
Inspire	29	21.83	4.32	12.00	28.00
Model	29	23.69	3.45	14.00	29.00
Enable	29	25.28	4.15	14.00	30.00
Encourage	29	22.93	3.86	15.00	28.00
LPI-Other					
Challenge	29	22.09	2.59	14.80	27.00
Inspire	29	21.56	2.79	16.00	26.50
Model	29	22.66	3.05	16.60	28.00
Enable	29	23.75	2.81	16.40	27.80
Encourage	29	22.85	3.45	14.40	29.20
Average for 5 LPI-S items:					
Principal	29	23.27	3.20	16.00	28.80
Average for 5 LPI-O items:					
Observers	29	22.58	2.60	15.64	26.80

*Effective Schools Survey

University of San Diego

MEMORANDUM

DATE: May 21, 1992

TO: Dr. Ed Kujawa, Professor
School of Education

FROM: Dr. Rita Snyder-Halpern, Chair
Committee on the Protection of Human Subjects

RE: Ex Post Facto CPHS Approval of Ron Brice's Dissertation Research

This memorandum is written in response to your recent correspondence regarding the lack of final CPHS approval of Mr. Brice's dissertation research prior to its implementation in Fall 1989. In reviewing your written summary of this situation, as well as available documentation, it would appear that Mr. Brice's CPHS proposal modifications, requested in May 1989, would have been approved had they been forwarded for review and action to the CPHS Chair at that time. I would agree that the proper intent for CPHS approval was evident.

I appreciate your willingness to pursue this situation and your cooperation in working towards a satisfactory resolution.

Alcalá Park, San Diego, California 92110 619/260-4600