Instructional leadership in the principal role : testing the effectiveness of practices in the implementation of a curricular innovation
by Marilyn Helen King

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:
The relationship between the instructional leadership practices of elementary school principals in a district during a curricular innovation and student achievement in spelling as reflected in standardized test scores was analyzed to identify specific "best practices" in instructional leadership. Participants were classroom teachers in grades one through three and the six associated elementary principals. The design was a multi-site case study. Teachers and principals were surveyed to assess the four main areas of instructional leadership described by Smith and Andrews (1989), i.e., the principal as a visible presence, the principal as a communicator, the principal as an instructional resource, and the principal as a resource provider. These dimensions were expanded by the researcher into specific instructional leadership behaviors related to the implementation of Process Spelling.

Individual school profiles were developed, and data included in the profiles were reconstructed. School level survey results were calculated as simple averages of the collective ordinal values for each question in each of the survey subsections. An overall survey ranking was obtained for each school.

Test score information for both the Comprehensive Test of Basic Skills and the Test of Written Spelling-3 was collected and analyzed. School-specific trends and achievement and improvement patterns in comparison to other schools in the district were noted. A grounded theory was formalized by rank ordering the frequencies of leadership behaviors, opinions regarding leadership beliefs, and spelling achievement and improvement.

At the school level, high expectations should be promoted for both students and teachers. Teacher collaboration should be facilitated. The use of the teacher-leader concept appears to be an effective method to provide site leadership regarding specific content. Teacher collaboration and teacher leadership may be promoted during faculty meetings, during which opportunities for professional development should exist. The principal's responsibility lies in the support of avenues which assist in keeping discussion of instructional methods at the forefront. Formal evaluation which includes specific instructional strategies and resultant student performance measures are important in the implementation and subsequent monitoring of curricular innovations.

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A dissertation submitted in partial fulfillment
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APPROVAL

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This dissertation has been read by each member of the dissertation committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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Abstract

The relationship between the instructional leadership practices of elementary school principals in a district during a curricular innovation and student achievement in spelling as reflected in standardized test scores was analyzed to identify specific "best practices" in instructional leadership. Participants were classroom teachers in grades one through three and the six associated elementary principals. The design was a multi-site case study. Teachers and principals were surveyed to assess the four main areas of instructional leadership described by Smith and Andrews (1989), i.e., the principal as a visible presence, the principal as a communicator, the principal as an instructional resource, and the principal as a resource provider. These dimensions were expanded by the researcher into specific instructional leadership behaviors related to the implementation of Process Spelling.

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Test score information for both the Comprehensive Test of Basic Skills and the Test of Written Spelling-3 was collected and analyzed. School-specific trends and achievement and improvement patterns in comparison to other schools in the district were noted. A grounded theory was formalized by rank ordering the frequencies of leadership behaviors, opinions regarding leadership beliefs, and spelling achievement and improvement.

At the school level, high expectations should be promoted for both students and teachers. Teacher collaboration should be facilitated. The use of the teacher-leader concept appears to be an effective method to provide site leadership regarding specific content. Teacher collaboration and teacher leadership may be promoted during faculty meetings, during which opportunities for professional development should exist. The principal's responsibility lies in the support of avenues which assist in keeping discussion of instructional methods at the forefront. Formal evaluation which includes specific instructional strategies and resultant student performance measures are important in the implementation and subsequent monitoring of curricular innovations.

CHAPTER 1

INTRODUCTION AND STATEMENT OF THE PROBLEM

If we, as a society, wish to improve the quality and outcomes of instruction for students, we must acknowledge the principal in providing the instructional leadership for teachers to better plan, deliver, and monitor instruction for students. Instructional leadership encompasses a broad range of actions. Professional practices that provide the foundation for instructional leadership may be viewed discretely or collectively. A need exists to know which practices in instructional leadership, when implemented during a curricular adoption, are related to increased pupil academic performance as indicated by achievement test scores. The purpose of this chapter is to introduce a study that investigated the relationship between instructional leadership practices and beliefs and spelling achievement in first, second, and third grade students in the Bozeman Public Schools.

Background of the Study

Instructional leadership results from the repetition of day-to-day acts conducted by principals that demonstrate understanding of the nature of instruction and promote growth in student learning (Blase & Blase, 1999; Hallinger & Murphy, 1987; Krug, 1992). Smith and Andrews (1989) describe a principal who is an instructional leader as one who provides necessary resources to facilitate achievement of a school's academic

goals; possesses knowledge and skill in curriculum and instructional matters in order to interact with teachers regarding improved instructional practices; communicates skillfully in one-on-one, small, and large group settings; and acts as a visionary who, by means of visible presence, articulates the school's mission. In an educational environment, the term "learning community" implies collegiality, shared problem-solving, critical thinking, and learning among its members, i.e., staff and students (Barth, 1990; Bruner, 1996; Glickman, 1993; Lambert, 1998). In a community of learners, administrators and teachers work together to design and provide instruction which will promote student academic achievement. In such a community, principals share instructional leadership with teachers in a variety of formats, including coaching, reflection, collegial investigation, study teams, and problem solving (Blase & Blase, 1999).

Principals, unlike classroom teachers, are seldom linked to students. This condition creates challenges in studying whole schools, as opposed to singular classrooms, for effects on the academic achievement of students because of the inherent variability of environments and student and teacher characteristics. In the area of principal instructional leadership, the relationship is even more problematic because the principal is not directly linked to students, as is the case of the classroom teacher. Bossert, Dwyer, Rowan, and Lee (1982) have suggested two areas of principal influence within the school setting: building school climate and supervising instructional organization. As a result of their leadership, principals may affect school governance, decision-making, communication channels, the promotion of a safe and orderly climate

for learning, staff, and parental involvement, and the allocation of personnel, financial, and other resources.

Principals' instructional leadership activities generally do not appear to affect the academic performance of students directly (Bossert et al. 1982; Boyan, 1988; Glasman & Heck, 1987; Larsen, 1985, 1987; Pitner, 1988), but do have indirect effects. Such activities are posited to have a "trickle-down effect" that promotes student achievement (Heck, Larsen, & Marcoulides, 1990).

Research, specifically case studies, ethnographies, and correlational studies, supports correlations between principal instructional leadership activities and school outcomes, including student achievement (Bridges, 1982; Hallinger & Murphy, 1987). Heck et al. (1990) suggest that the conceptual domains of principal instructional leadership are multidimensional, although causal effects of instructional leadership behavior on school student achievement have not been adequately tested.

An attempt to link principals' instructional leadership practices and beliefs to student achievement made by Andrews and Soder (1987) provided 18 strategic interactions among principals and teachers in four interrelated instructional leadership role functions: (a) resource provider, (b) instructional resource, (c) communicator, and (d) visible presence. According to Andrews and Soder (1987), strong instructional leadership in these four specific domains was associated with increased gains in mathematics and reading, particularly among low-achieving students. Although little disagreement exists concerning the belief that principals have an impact on the

effectiveness of their schools, there appears to be a "missing link" in attempts to establish a direct line of impact from principal behaviors to student achievement.

The adoption of a spelling curriculum for primary students in a medium-sized elementary school district in Bozeman, Montana provided an opportunity to explore this link. The Bozeman Public Schools' Board of Trustees adopted the Process Spelling (Fontenault & Salter, 1993) program during the 1999-00 school year to provide strategy-based training lessons that address the needs of a differentiated classroom, and to raise student achievement levels in spelling. In curriculum implementation, the best results occur when teachers take ownership of a proposed program for change. Research suggests the instructional leadership of the principal is a critical determinant in the effectiveness of a school's curricular program (Pajak & Glickman, 1989). This study was designed to determine the relationship between the actions a principal takes or delegates to promote growth in the achievement of students during a curricular innovation.

Problem Statement

The relationship between specific instructional leadership attributes, as practiced by a district's principals, and student achievement is not known.

Purpose Statement

The purpose of this study was to explore the relationship between the instructional leadership practices and beliefs of elementary school principals in the Bozeman Public Schools during a curricular innovation and student achievement in

spelling as reflected in standardized test scores. It was intended to identify specific "best practices" in instructional leadership being utilized by principals who have seen increased achievement scores in spelling of students in their schools. It was also intended to identify instructional leadership practices and beliefs being utilized by principals that have not resulted in increased achievement scores in spelling of students in their schools.

Research Questions

The following question and related sub-questions were used in this study to structure the inquiry and to guide the development of research procedures and methodologies in order to achieve the research purposes:

- What specific instructional leadership practices and beliefs are related to the effectiveness of Process Spelling as inferred from spelling achievement scores?
  - What instructional leadership practices and beliefs of principals related to Process Spelling are practiced at elementary schools in Bozeman?
  - Do relationships exist between the implementation of the Process Spelling curriculum in grades 1 through 3 in the Bozeman Public Schools and increases in Comprehensive Test of Basic Skills (CTBS) spelling scores and Test of Written Spelling (TWS-3) scores?

Definition of Terms

In order to provide greater clarity and understanding, the following terms are defined.. Other terms will be defined throughout the text.

Best Practices: Research-based educational practices which, when used by practitioners, have produced evidence of success. Best practices are determined by their "impact on student learning and growth and whether the school population that showed successful growth in the studies was similar to the students in the school selecting the program" (Wood & Thompson, 1993, p. 54).

Curricular Innovation: Appropriate and promising practices and procedures the staff in a school develops or adopts and, when necessary, adapts (Hall & Hord, 1987).

Gain Scores: Achievement test growth as measured by post-test minus pre-test scores. Gain scores must be used with caution, as not every participant has the same opportunity to gain, and gain scores tend to be less reliable than analysis of only post-test scores (Gay & Airasian, 2000).

In-service: A generic term used to include training activities in schools or districts. In-service activities are typically single-event opportunities. "Several times a year, school administrators release students for a half or full day and hold an 'in-service' program...Teachers typically spend a few hours listening and, at best, leave with some practical tips or some useful materials" (Corcoran, 1995, p. 2).

Instructional Leadership: Direction and supervision in establishing and promoting instructional improvement, i.e., helping teachers acquire teaching strategies that increase the capabilities of the students to make wise decisions in various contexts

(Glickman et al., 1995) within the organizational structure of a school. The assumption in this study is that instructional leadership activities can be measured. In this study, instructional leadership also includes provision of formal in-service training in Process Spelling.

Paradigm: A general perspective of how one views the world. "Paradigms represent a distillation of what we *think* about the world (but cannot prove)" (Lincoln & Guba, 1985, p. 15).

Process Spelling: The spelling program adopted by the Bozeman Public Schools. Marketed by its creators (Fontenault & Salter, 1993) as the Cast-A-Spell Program, Bozeman Public Schools chose to refer to the program as Process Spelling.

Professional Development: Intellectual, social, and emotional engagement with ideas, materials, or colleagues. It is a dynamic process which leads to increased personal understanding about content and pedagogy. Professional development focuses on core challenges of teaching. Professional development opportunities include individually guided development, observation/assessment, involvement in a development/ improvement process, peer interactions in the form of coaching or mentoring, and reflection. Hord and Boyd (1995) write, "Professional development activities contribute to a culture of collegiality, critical inquiry, and continuous improvement; the school culture, in turn, stimulates ongoing professional development–a mutually reinforcing relationship" (p. 10).

Professional Growth: The development of technical, clinical, personal, and critical competencies in a teacher. "Teachers are professionals who, when asked to reflect

on, question, and redefine their practices, can make powerful changes to improve teaching and learning" (Black, 1995, p. 22).

Relationship: A determination of whether variables, or factors, have effects on an intended variable, in this case, student achievement in spelling. "Relationship studies attempt to gain insight into variables that are related to complex variables such as academic achievement" (Gay & Airasian, 2000).

Staff Development Program: A group activity designed to assist educators in obtaining similar concepts and achieving similar skills. Richardson, Flanigan, and Pickett (1990) describe staff development as "a process designed to foster personal and professional growth for individuals within a respectful, supportive, positive organizational climate having as its ultimate aim better learning for students, and continuous, responsible self-renewal for educators and schools" (p. 4). Although the terms in-service, professional development, professional growth, and staff development provide slightly different nuances in definition related to teacher training and continuing education, for the purposes of this study the terms are used interchangeably.

Significance of the Study

Importance to Principals

This constructivist study provides detailed profiles of instructional leadership circumstances of specific schools in order to determine *which* instructional leadership practices and beliefs are occurring at each particular school and *how* these practices and beliefs may be related to student achievement in spelling. Effective principals are

reflective principals who are able to interpret and relate the professional literature to their own particular school circumstances in the formulation of instructional leadership strategies that work best for their particular school. Sergiovanni (1995) writes:

> Reflective principals are in charge of their professional practice. They do not passively accept solutions and mechanically apply them. They do not assume that the norm is a one best way to practice, and they are suspicious of easy answers to complex questions. They are painfully aware of how context and situations vary, how teachers and students differ in many ways, and how complex school goals and objectives actually are; they recognize that, despite difficulties, tailored treatments to problems must be the norm. At the same time, reflective professional practice requires that principals have a healthy respect of, be well informed about, and use the best available theory and research and accumulated practice wisdom. All these sources of information help increase understanding and inform practice. (pp. 35-36)

Contribution to the knowledge base describing effects of instructional leadership on student achievement is important. Hallinger and Heck (1996) maintain that "no universal paradigm or theory exists for organizational behavior that is valid in all contexts" (p. 7). Thus, a need continues to exist for additional information, both conceptually and specifically, on the relationship between instructional leadership behaviors and pupil performance. The development of school profiles, which are used to organize data and instructional leadership behaviors at six schools in a district, will provide principals the opportunity to reflect upon research, theory, and context so that leadership decisions may be more informed in their individual schools.

Process Spelling

Although more than three-quarters of the District's primary teachers were piloting the new spelling program during the 1998-99 school year, the Cast-A-Spell program was formally adopted by the Bozeman Public Schools for the 1999-00 school year, and the

program name for the District was changed to Process Spelling. Two years after formal adoption of the curriculum, with four years of in-service instruction for some teachers and three years of assessment and instruction for students, informal interviews with the Curriculum Director (T. Baldus, personal communication, April 18, 2001) and the Assistant Superintendent of the Bozeman Public Schools (R. Gutzman, personal communications, April, 24, 2001; August 17, 2001) indicate satisfaction with the Process Spelling program, but suggest that additional information regarding principal leadership at the various elementary school sites would be beneficial to help increase effectiveness of implementation and the overall curricular adoption.

Test Scores

The need for additional information stems from inconsistencies within and among elementary schools in the Bozeman Public Schools in the Comprehensive Test of Basic Skills (CTBS) percentile gain scores, as noted in Appendix A, and a lack of understanding of how the national percentiles may be correlated to the District's other spelling assessment, the Test of Written Spelling (TWS-3). Variability in third grade CTBS national percentiles among the six elementary schools over the last four years and associated percentile differences between April 1998 scores and March 2001 scores are noted in Table 1. Mean scores and achievement score growth differences appear to vary among the six schools.

Table 1. Mean national percentiles for grade three for spelling over the last four years according to the CTBS (Bozeman Public Schools, 2001a).

			Grade 3		
	4/98	4/99	4/00	3/01	
School	Mean	Mean	Mean	Mean	Difference
School 1	65	62	61	64	-1
School 2	51	62	60	64	+13
School 3	83	77	64	50	-23
School 4	46	57	52	65	+19
School 5	68	70	66	76	+ 8
School 6	32	50	52	48	+16
District	58	64	60	64	+6

In October 1998, the District adopted the use of the TWS-3 which provides pre- and post-test scores for students in grades 1 through 5. It was selected for use because of the pre- and post-test protocol, with the expectation that such student data would provide information on the effectiveness of the Process Spelling curriculum. The TWS-3 is administered to all students, grades kindergarten through 5, as opposed to the CTBS which, since 1997, is not administered to students below grade 3. Thus, the TWS-3 was adopted one year prior to the formal adoption of Process Spelling.

Mean post-test TWS-3 scores for grade three students for the 1998-99, 1999-00, and 2000-01 school years are shown on Table 2. Mean standardized scores and standard deviations are provided in Appendix A for grades 1 through 3 for the 1998-99, 1999-00, and 2000-01 school years.

Table 2. TWS-3 mean post-test scores for grade three for the 1998-99, 1999-00, and 2000-01 school years (Bozeman Public Schools, 2001b).

	Grade 3		
School	1998-99 Post-Test Score	1999-00 Post-Test Score	2000-01 Post-Test Score
School 1	105.8	109.7	108.9
School 2	112.1	105.8	110.7
School 3	105.7	108.8	101.3
School 4	94.3	104.3	103.7
School 5	106.4	112.8	118.3
School 6	101.0	105.4	105.0

With limited time and resources in the Bozeman Public Schools, instructional leadership practices and beliefs must be chosen carefully by the principal. The student as learner is the key to any successful curricular implementation. Policymakers continue to demand "nationally validated test accountability" (Orlich et al., 1993, p. 2), and in an operational sense, the Bozeman Public Schools' Board of Trustees, administrators, teachers, and families expect student achievement levels in spelling to be raised through the use of Process Spelling. Change in teacher behavior is an outcome of effective staff development programs (Sousa & Donovan, 1993), yet gains in pupil performance provide the operational definition for program effectiveness for practitioners, policy-makers, and the public.

Educational decision-makers need to make informed planning and action decisions based on information from data-based research. Principals, as reflective practitioners, need specific data regarding their schools and their own leadership practices and beliefs in order to most effectively implement curriculum and impact student performance. In this case, the elementary principals in the Bozeman Public

Schools would benefit from examination of school-specific trends in spelling achievement data and instructional leadership practices and beliefs in order to gain perspective about how their behaviors are impacting pupil performance in spelling.

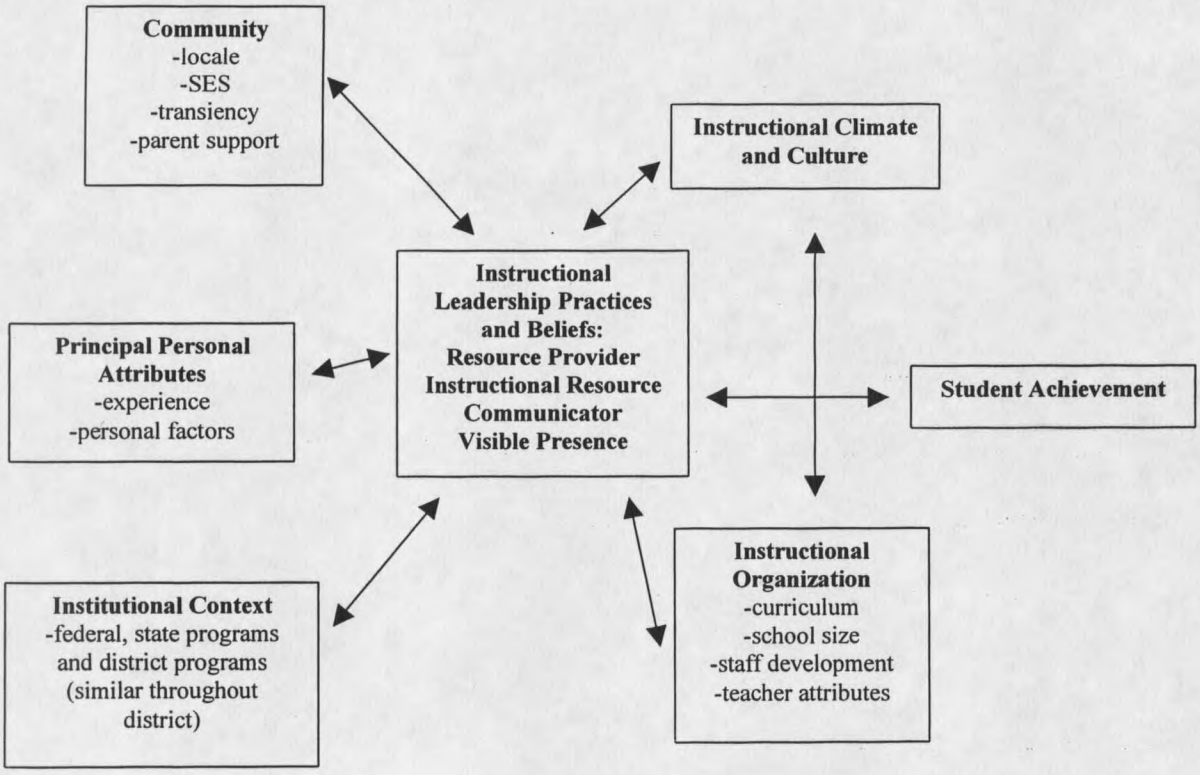
Conclusion

Since research suggests no direct link exists between principal behavior and student achievement, Figure 1 proposes relationships between principal instructional leadership variables and spelling achievement in the Bozeman Public Schools. A variety of factors may influence principal instructional leadership behaviors. In addition to personal characteristics of the principal, school size, and community culture often impact instructional organization. Instructional leadership behaviors influence school climate and school climate also influences those leadership behaviors. Additionally, federal, state, and district programs may impact instructional operations of a principal. Instructional organization is related to leadership activities and climate. Reciprocal relationships also exist. Ultimately, student achievement, in this case spelling, is impacted, with the principal's instructional leadership contributing to student achievement directly through principal behaviors, or indirectly through the establishment of school climate and instructional organization.

Through the use of surveys, interviews, test data, and specific school information, individual school profiles and associated instructional leadership activities were developed. This grounded theory study resulted in a model for the Bozeman Public Schools.

Figure 1. Proposed model of principal instructional leadership variables influencing student spelling achievement in the Bozeman Public Schools, based on models by Bossert, Dwyer, Rowan, and Lee (1982) and Reyes and Capper (1991).

The following propositions provide the theoretical foundations of this study:



1. All school improvement and professional development efforts should provide for improved student learning outcomes (Guskey & Sparks, 1996; Speck, 1996).
2. Professional development is a continual process. According to Speck (1996), "Professional development is a multiple, diverse, and on-going process, not a one-shot approach" (p. 35).
3. The instructional leadership of the principal is essential to any effort to improve professional practice (Wood & Thompson, 1993; Speck, 1996).

4. Systematic support for teachers, including coaching, is necessary for the transfer of learning from training into daily practice (Speck, 1996).
5. Efforts by teachers to grow professionally should be recognized by an effective instructional leader.
6. Instructional leadership should support instructional and program improvement. Professional development should be linked to instructional practice, teacher evaluation, and curricular implementation.
7. Teachers in a school setting often learn from colleagues within their school (Darling-Hammond & McLaughlin, 1995; Lieberman, 1995).
8. Teachers need opportunities at school to discuss, experiment with, and enhance new practices (Darling-Hammond & McLaughlin, 1995; Lieberman, 1995).

Research supports an array of specific activities involved in instructional leadership which are woven into the job demands of the principal. Whether by design or incidentally, instructional leadership activities by principals, in support of curricular implementation like the Bozeman Public Schools' Process Spelling program, affect instruction and, ultimately, student achievement. In Chapter 2, a review of the literature is provided. The review provides conceptual background, a theoretical foundation, and a research base for interpreting what is known about the relationship between instructional leadership activities and student achievement.

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