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ABSTRACT

This study examined Colorado teachers' perceptions of internal and external accountability. K-12 teachers in large, medium, and small school districts completed surveys that asked about the degree to which they perceived they were accountable for specific items in their classroom and building and the degree to which they perceived themselves to be accountable to specific people or groups. Overall, teachers viewed accountability from a primary focus on self from within the isolated classroom environment more so than from the external accountability of the state performance based accountability system (PBAS). Although their highest sense of accountability was to themselves, they were nearly equally accountable to their students. Teachers felt more accountable for items under their direct control (e.g., curriculum, learning climate, and student achievement) than items they might influence but not control (e.g., parent involvement and student attendance). Teachers felt more accountable for items in the classroom than for those same items in the building. Teachers favored indicators in a PBAS that did not influence their behavior and were less in favor of including ones that would influence behavior. Teachers' perceptions of accountability did not depend on demographic characteristics. (Contains 28 references and 8 tables.) (SM)

Teachers' Perceptions of Accountability

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Accountability and Systemic Reform

The wave of education reform in the first part of the 1980s was spawned by the release of A Nation at Risk in 1983, with its call for higher expectations for students and standardized achievement tests at major educational transition points. Policy making around educational reform was frenetic in the early part of the 1980s, but not particularly deep (Fuhrman & Elmore, 1990; Fuhrman, Elmore, & Massell, 1993; Adams & Kirst, 1999). A vast amount of policy was created with little of it focused or aligned sufficiently with other policy pieces to be instrumental in producing broad education reform.

Initial reforms were particularly characterized by "top down" policy efforts that produced meager results (CPRE, 1991). Longer school days, increased high school graduation requirements, increased testing of students in basic skills and higher standards for teachers (e.g. certification) were the major results of education policy activity (p. 2). These policy efforts increased requirements but had little effect on raising the education community's or the public's expectations of students regarding achievement. Also, basic

skills testing of students increased, but little attention was paid to whether these tests were aligned to state and local curricula, thereby actually testing what was being taught.

A second wave of reform evolved during the last part of the 1980s. Unlike the first wave, the development and implementation of policy in parallel environments at the state level and the school level characterized this movement. State policy activity concentrated primarily on mandating additional academic courses and changing policies dealing with teacher certification and compensation (CPRE, 1989). School-level reforms included such elements as site-based management, shared decision-making and professional collaboration (CPRE, 1991).

Policymaking remained frenetic at both state and district levels during this second reform wave. The problem during this period laid in the lack of coherence within the policy agenda, resulting in conflicting messages being sent to schools and districts (CPRE, 1991). For instance, policymakers were motivated by the perceived need to improve both the quality and quantity of teachers. One response was to make teacher certification requirements more stringent in an attempt to improve teacher quality. However, these policies also had the possibility of creating shortages, since fulfilling the requirements both to enter teacher preparation programs and to earn certification became more and more difficult. In contrast, alternative methods of certification, which could be considered less stringent, were encouraged in the hope of increasing the quantity of available teachers (CPRE, 1989).

The reform movement gained momentum with the first National Education Summit in 1989. Education policy began to focus on accountability, firmly shifting the focus from process and inputs to product and outcomes. The implementation of new

standards for student learning required systemic changes in the structure of education at the state level. The goal of educational policy became " . . . substantial increases in student achievement" (Clune, 1993). This movement came to be called "'systemic' or 'standards-based' reform" (Fuhrman, 1994).

Follett Lusi (1997) stated "The promise, or potential strength, of systemic reform is that reform at the top of the system can bring about reforms at the bottom" (p. 7). Systemic reformers believe that all students can show significant achievement gains with this approach. However, Cibulka (1989) saw this shift to systemic reform as bottom-up in nature. Calling the movement "restructuring," he wrote, "Although the precise definition of [restructuring] remains unspecified, 'second-wave' reform stresses systemic rather than incremental changes and deregulatory strategies such as site-based management and reform of the teaching profession" (p. 417). In reality, both streams of reform were occurring at the same time, causing tremendous activity in policy development and reform implementation at both state and school levels.

State Education Accountability Systems

Between 1983 and the present, education accountability made a strong shift from compliance to performance. States created and began to implement standards for what students should know and be able to do and to build accountability systems to ensure progress toward those standards.

When complete, these systems are defined by the inclusion of four components: (1) standards and assessments, (2) multiple indicators, (3) rewards and (4) sanctions (ECS, 1999). Definitions of the components for purposes of this discussion are as follows:

Standards and Assessments: Standards are statements of what students should know and/or be able to do, with benchmarks written for each standard to define what each student should know at each grade level. The standards are coupled with assessments that measure how successful students are in meeting standards.

Multiple Indicators: An indicator measures either directly or indirectly the effect of a particular element on student achievement. A system of multiple indicators may include information on student assessment scores, dropout rates, graduation rates, discipline issues, and student or teacher attendance rates.

Rewards: A reward is granted to a teacher, school or district when student achievement exceeds the established standards or previously reported outcomes. These rewards are given for gains made; they are not given as grants or waivers to help schools work toward gains. Also, rewards are usually monetary in nature.

Sanctions: If student achievement falls below levels set by the standards, or if student test scores continually fail to show gains, the state may apply sanctions to whole districts or individual schools. Sanctions may vary from a simple warning to intervention and takeover by state officials.

An education accountability system is performance-based if the primary indicator of success or failure is student achievement scores based on the state assessments. The system is also considered high-stakes if rewards and/or sanctions are based on the success or failure of schools to show improvement or gains in this primary indicator among others (Elmore, Abelman & Fuhrman, 1996; King & Mathers, 1997).

As of January 1999, three states (Montana, North Dakota and Wyoming) had no components of an education accountability system in statute and ten states (Delaware,

Florida, Georgia, Illinois, Indiana, Kentucky, New Mexico, South Carolina, Texas and Washington) had all four components (ECS, 1999). The most widely used configuration consists of standards/assessments, multiple indicators and sanctions. A rewards component was not included in such a system. State examples included in this group are Alabama, Alaska, Arkansas, Colorado, Louisiana, Massachusetts, Michigan, Missouri, Nevada, Ohio, Oklahoma, Oregon, Rhode Island, Tennessee and West Virginia.

One of the newest members of this group was Colorado. The 1992 education reform law that formed the beginning of the Colorado performance-based accountability system (PBAS) established the standards and assessments component of the system (CRS § 22-7-401-10). During the time between 1992 and 1998, the state developed standards in reading, writing, mathematics, science, history, geography, art, music, physical education, foreign languages, economics and civics.

Fuhrman, Elmore and Massell (1993) argued "One way to educate the public and professionals, to enlist their important insights and expertise, and to grant them ownership of the reform enterprise is to involve them in the development of standards for students" (p. 14). Colorado followed this line of thought by heavily involving teachers in the writing of standards during the last five years in building its performance-based accountability system (PBAS). Teams of educators from around the state crafted the state standards, and teams of local educators continued the process by writing district standards that met or exceeded the state standards in nine, separate subject areas. Assessments aligned to these standards began in 1997 with fourth grade reading and writing, and continued in 1998 with the addition of third grade reading.

During the same time period, the Colorado Department of Education (CDE) was in the process of rewriting accreditation rules and procedures. By the end of 1996, the state legislature became interested in using these accreditation regulations as the basis for a sanctions component for the fledgling PBAS. House Bill 1267, written with this specific purpose in mind during the 1998 legislative session, was signed into law by Governor Romer in May 1998. Included in this statute were five levels of sanctions and a mandate to CDE to complete a set of multiple indicators. At the time the present study was undertaken, the 2000 General Assembly had not yet enacted the comprehensive school reform act that strengthened the sanctions and added a rewards component to the system (1999 CO S.B. 186).

Teachers and Perceptions of Accountability

The fundamental questions of who is being held accountable, and for what, are not currently answered within performance-based accountability systems (PBAS). Standards are written to define what students should know and be able to do, assessments measure student progress on standards, and performance-based indicators report other measures of student progress. In addition, indicators may measures of other factors that influence student achievement (i.e. teacher attendance and parent involvement). However, the parties measured by these indicators (i.e. teachers, parents) are not generally held accountable for their "performance." Sanctions are applied to districts or schools that do not show sufficient student progress based on various combinations of indicators.

The link between who is being measured and who is being held accountable is teachers. The purpose of a PBAS is customarily defined in statute as the improvement of

student learning, and the vast majority of learning is designed to occur in the classroom with students and a teacher. The classroom is also the level at which the data used in the PBAS indicator system are produced. Therefore, accountability policy finds its primary level of implementation at the classroom level. Successful implementation of a PBAS may then depend on three issues:

- teachers' understanding of the PBAS and how they are accountable within the state system;
- policymakers' understanding of how teachers perceive their personal (internal) accountability and the state (external) PBAS; and
- ways in which these understandings may impact both the development and implementation of the state accountability system.

Three previous research studies formed the foundation and framework for this study of teachers' perceptions of performance-based accountability systems. Broadfoot et al (1987) conducted the first of these studies. Researchers used both survey and interview techniques to compare how primary teachers in England and France perceived their general responsibilities as educators. Eight hundred subjects, 400 in England and 400 in France, were chosen by socio-economic and geographic distribution to participate. Results from the study include the following:

- there were no significant differences between views of teachers working in different socio-economic settings in the two countries;
- respondents reported that they were first responsible or accountable to themselves and then to their students; and

- isolation in the workplace was reported as the least significant of factors concerning the nature of teaching.

The second study, published by the Consortium for Policy Research in Education (CPRE), examined how teachers, administrators, students and parents think about accountability issues within the school, and the range of responses used by these parties to deal with the problem of accountability (Abelman et. al, 1999). Both working theory and research methods " . . . were predicated on the belief . . . that external accountability systems operate on the margins of powerful factors inside the school, and that understanding these factors is a major precondition to understanding how and why schools respond the way they do to external pressures for accountability"(p. 38).

Twenty schools, half from the east coast and half from the west coast, were chosen from districts and states where strong state accountability systems were just beginning to be implemented. The schools were a mix of public and private, elementary and secondary, and urban and suburban, with consideration of both the size and diversity of the student population. CPRE researchers concluded that:

- school-level factors based on the individual beliefs and values of teachers and administrators powerfully shaped the schools' conception of accountability;
- parochial and charter schools had the same problems constructing a conception of accountability as did public schools;
- the greater the isolation of teachers, the less likely that the school would successfully respond to outside demands of an external accountability system;
- the external system would remain relatively powerless unless educators' perceptions could be changed, since many educators do not believe that they

influence student learning in ways that the external accountability system suggests they should be able to influence that learning; and

- state accountability systems should be based not on the theories of how schools ought to act, but on " . . . a finer-grained understanding of why they act the way they do" (p. 42).

The third study, which served as both an initial foundation of this study and the development of the survey instrument, is the work of Cullen and Altschuld (1994). In their literature review, the authors found that although major research efforts have been devoted to the subject of educational accountability during the past 25 years, "Conspicuously absent from this body of research has been the investigation of educators' views toward the topic, specifically, [of] teachers' perspectives toward accountability" (p. 1). After analyzing a series of semi-structured interviews with 18 teachers in seven Central Ohio districts, the researchers concluded:

- all teachers in the study were accountable;
- audiences mentioned most often were those with whom teachers worked in close proximity;
- teachers were accountable for performance of curricular responsibilities, student academic growth, and achievement; and
- teachers were accountable to the two primary audiences of students and self.

Comparing the results of these three studies yields several similarities. First, Broadfoot et al. (1987) reported no significant differences between teachers working in different socio-economic settings, whether they taught in France or England. CPRE (1999) found that teachers and administrators from parochial and charter schools had the

same problems constructing a conception of accountability as did educators in public schools. It would appear, to quote a slightly altered adage, that "a teacher is a teacher is a teacher." Neither geographic position nor type of institution seemed to have made any difference in educators' responses.

Second, some similarity exists in results dealing with proximity. Teachers in England reported that their work was more greatly influenced by the context of their schools than by outside factors. Cullen and Altschuld (1994) found that the groups mentioned most often were those with whom they worked in close proximity. CPRE researchers (1991) concluded that school accountability reflected individual beliefs and values of teachers and administrators in the school. Respondents in all three studies appear to think in terms of their personal, professional workspace and in terms of the people with whom they share parts of that workspace when dealing with accountability.

The concept of teacher isolation is closely connected with the above analysis. Lortie (1975) spoke of the "cellular" characteristic of school organization, where each individual is connected by organizational structure but carries out his or her function within the organization in an isolated classroom or "cell." Both Sarason (1971) and Lieberman and Miller (1984) described teaching as a lonely profession.

Two studies in particular poignantly describe the isolation of teachers. In a study of high school teachers in California, Eisner (1988) noted "The teachers we interviewed said that they can go a whole day without speaking to an adult" (p. 29). In a Florida study of 196 teachers, Griffin found that 80 percent of each teacher group (elementary, junior/middle and senior high) reporting that they felt "Your classroom is a private world which no one besides you and your students enter" (as cited in Rothberg, 1986).

In addition, isolation may serve as a barrier to effective collaboration with other teachers (Bondy & Brownell, 1997). Because the culture of isolation dictates that teachers do not question another's competence or pedagogy within respective classrooms, isolation persists within the culture (Griffin, 1995).

One of the most intensely collaborative situations affected by isolation is the traditional field experience of student teaching (Koerner, 1992). Being a part of the teacher preparation process demands that cooperating teachers open their isolated environment to future colleagues. Student teachers are given the opportunity to practice the art of teaching in an environment that is not later replicated in their experience as a licensed professional. The isolation of the regular classroom cannot be duplicated when the student teacher shares the classroom of the cooperating teacher.

A Survey of Colorado Teachers

Survey research was the method for this study of teachers' perceptions of accountability. The instrument was specifically designed for use with Colorado teachers. The first section gathered data on internal accountability by asking teachers to state (1) to what degree they perceived they were accountable for specific items in their classroom and building, and (2) to what degree they perceived themselves to be accountable to specific people or groups. The second section gathered the same type of data on external accountability, using specific indicators and levels of sanctions from the present Colorado PBAS and examples of indicators, rewards and sanctions in place in other states.

The study included a purposive sample of teachers in selected Colorado districts. Participating districts were organized into three subgroups by student population. Large districts included those above 24,000; medium districts enrolled 10,000 to 24,000

students; and small districts had fewer than 10,000. Instruments were sent to one elementary school, one middle school and one high school in each large and medium district, and to all schools in the small districts since the majority of small districts had only one school at each level. The exception was one large district where no middle school contacted was willing to participate.

Of the 1441 instruments sent, 568 were returned yielding an overall return rate of 39.4%. This information appears as Table 1, which also details the same information for the large, medium and small districts. The return rate varied from a high of 45.2% for small to 31.8% for large districts.

Table 1

Survey Rate of Return

Respondents	# Sent	# Returned	Rate of Return
Large districts	447	142	31.8%
Medium districts	310	117	37.7%
Small districts	684	309	45.2%
Total	1441	568	39.4%

Characteristics of respondents appear as Table 2. For all groups, the ratio of males to females was approximately 1:2.2. The ranges and averages of both years of experience and years at current assignment were approximately the same for large and small districts. There was slight variation in these demographics in medium districts, where both ranges of years of experience and years at current assignment were less than for the other groups.

Teachers with master's degrees held a slight majority over teachers with baccalaureate degrees. The ratio of teachers with master's degrees to those with baccalaureate degrees was approximately 1.2:1 for the state and 1.5:1 for large and medium districts. In the small districts, the ratio was 1:1, indicating that a nearly equal number of respondents in small districts held bachelor's and master's degrees. Three respondents reported having a doctoral degree.

Demographic characteristics of total respondents mirror closely data on the same variables for all Colorado teachers. Comparisons indicate that for all areas where data were available, the differences between total survey respondents and the population of teachers in Colorado are plus or minus 4.6% or less. Also, the proportions of teachers in Colorado with baccalaureate, master's and doctoral degrees are mirrored exactly in the proportions for total respondents of this study.

Research Question and Data Analysis

Parts One (Internal Accountability) and Two (External Accountability) of the survey instrument provided information to analyze research questions. The demographic information entered the analysis for the fifth research question only. The matrix presented as Table 3 guided the analysis.

Table 2

Description of Respondents by Demographic Characteristics

Variable	Description	Total	Large	Medium	Small
Gender	Male	182	42	45	95
		(32.04%)	(29.6%)	(38.46%)	(30.74%)
	Female	383	100	71	212
		(67.43%)	(70.4%)	(60.68%)	(68.61%)
	Missing	3	0	1	2
		(0.53%)	(0.00%)	(0.85%)	(0.65%)
Years of	Range	1-37	1-36	1-33	1-37
Experience	Average	14.7	14.2	16.8	14.1
Years at Current Assignment	Range	1-37	1-35	1-27	1-37
	Average	8.1	6.7	9.0	8.4
Level	Elementary	249	69	79	101
		(43.84%)	(48.59%)	(67.52%)	(32.69%)
	Middle School	146	47	19	82
		(25.70%)	(33.10%)	(16.24%)	(26.54%)
	High School	173	26	19	124
		(30.46%)	(18.31%)	(16.24%)	(40.13%)
	Missing	0	0	0	1
		(0.00%)	(0.00%)	(0.00%)	(0.32%)
Degree	Bachelor	252	55	47	150
		(44.37%)	(38.73%)	(40.17%)	(48.54%)
	Masters	304	85	70	149
		(53.52%)	(59.86%)	(59.83%)	(48.22%)
	Doctorate	3	2	0	1
		(0.53%)	(1.41%)	(0.00%)	(0.32%)
	Missing	9	0	0	9
		(1.58%)	(0.00%)	(0.00%)	(2.91%)

Table 3

Matrix of Data Analysis

Research Questions	Survey Questions	Variables	Statistical Method
1. For what do selected teachers in Colorado perceive they are accountable as teachers?	1 and 2	1. All respondents 2. Size of district	1. Frequencies 2. Percentages 3. Means 4. Paired t-tests between variables on survey questions 1&2
2. To whom do teachers in Colorado perceive they are accountable as teachers?	3	1. All respondents 2. Size of district	1. Frequencies 2. Percentages 3. Means
3. Is there a relationship between what teachers in Colorado feel they are accountable for and which indicators they feel should be included in a multiple indicator component of a state education accountability system?	1 and 2 with 4 Specifically: (a) achievement (b) behavior (c) attendance	1. All respondents	1. Pearson Correlation 2. ANOVA
4. What relationship exists between the degree to which teachers in Colorado feel specific items should be included in a state education accountability systems, and the degree to which they feel that inclusion would affect their behavior?	4-7	1. All respondents 2. Size of district	1. Frequencies 2. Percentages 3. Means 4. Paired t-tests between "include in system" and "influence behavior
5. What relationships exist between the demographic characteristics of teachers in Colorado and their perceptions of accountability?	1-7	1. All respondents	1. ANOVA 2. Bonferroni

Results: Internal Accountability

Question 1: For what do selected Colorado teachers perceive they are accountable?

Teachers were asked to state to what degree they perceived they were accountable on seven specific items using a 5-point Likert scale. Their responses appear in Table 4 in order from highest to lowest. The overall mean for each item determined the rank order.

Table 4

For What Are Teachers Accountable?

In the Classroom	Mean	Std Dev	In the Building	Mean	Std Dev
Learning Climate	4.63	0.72	Learning Climate	3.85	1.06
Curriculum	4.39	0.90	Student Achievement	3.67	1.13
Standards	4.22	1.03	Standards	3.64	1.19
Student Achievement	4.19	0.88	Student Behavior	3.63	1.13
Student Behavior	4.17	0.96	Curriculum	3.62	1.18
Parent Involvement	3.26	1.15	Parent Involvement	2.95	1.16
Student Attendance	2.74	1.23	Student Attendance	2.53	1.22

Respondents perceived they are more accountable for items under their direct control than for items they may influence but not directly control. The five items for which respondents reported they are most accountable were those concerning instruction or the atmosphere in which that instruction takes place. These were learning climate, curriculum, standards, student achievement and student behavior. The two items rated lowest were parent involvement, something that they may foster as teachers but over which they have relatively little primary control, and student attendance, which is also something they might encourage but do not fundamentally control. These groupings remained for all respondents and district sizes.

Respondents also perceived that they are significantly more accountable for the same seven items in the classroom than in the building. The more removed the item was from the classroom environment, they reported less accountability. Since the same items appeared for "in the classroom" and "in the building," paired t-tests detected significant differences between the means of the matching items (see Table 5). All differences proved statistically significant ($\alpha \leq .05$). Thus, respondents perceived themselves as significantly more accountable in their classroom than in the building for the seven items.

Table 5

Results of Paired t-Tests for Research Question 1

Item	N	Mean	Std Error	T	Prob>T
Curriculum	562	0.761	0.046	16.619	0.0001
Learning climate	563	0.787	0.043	18.499	0.0001
Parent involvement	561	0.317	0.039	8.225	0.0001
Standards	561	0.576	0.041	14.057	0.0001
Student achievement	560	0.518	0.040	13.065	0.0001
Student attendance	560	0.225	0.035	6.377	0.0001
Student behavior	563	0.542	0.040	13.444	0.0001

This finding corresponds with teacher isolation literature. The classroom is an isolated, lonely place (Sarason, 1971; Lortie, 1975; Lieberman & Miller, 1984; Rothberg, 1986; Eisner, 1988). Teachers remain " . . . focused on their own classrooms, the only places where they feel they have any control" (Bondy & Brownell, 1997). They express more accountability for items in the classroom environment that they may control, such as student achievement, than they do for these same items in the larger school environment or the state system.

Question 2: To whom do selected Colorado teachers perceive they are accountable?

Teachers were asked to state the degree to which they were accountable for seven specific people or groups on a 5-point Likert scale. The results are listed in Table 6 in rank order by the overall mean for each person/group.

Table 6

To Whom Are Teachers Accountable?

Item	Mean	Std Dev
1. Self	4.88	0.39
2. Students	4.71	0.61
3. Administration	4.40	0.95
4. Parents	4.25	0.90
5. Other teachers	3.53	1.09
6. Government (all levels)	3.05	1.16
7. Community Organizations	2.94	1.16

Respondents reported that they were first accountable to themselves and then to their students. After self and students, they were accountable to groups attached to activities directly affecting their classroom (e.g. administration, parents, other teachers) and then to groups outside the classroom (e.g. government at all levels, community organizations). These results mirrored what teachers perceived they were accountable for in the classroom and the building. They reported feeling more accountable to the people (self and students) within the classroom than outside the classroom, just as they reported feeling more accountable for items within the classroom than those outside the classroom.

Respondents reported being more accountable to "self" and "students" than to other groups. This focus of accountability first to "self" and then to "students" is mirrored in other studies. Cullen and Altschuld (1994) concluded that "self" and "students" were the two primary

audiences of accountability for Ohio teachers. They also observed, "Teachers mentioned audiences with whom they worked in close proximity and had immediate access through direct interaction as those to whom they were accountable. These audiences were self, other teachers, principal, students and parents" (p. 15). Results were also remarkably similar in a comparative study of French and British primary school teachers' conceptions of professional responsibility (Broadfoot et al., 1987). The geographic distinction cannot be ignored. Teachers in Colorado, Ohio, France and Great Britain reported the same sense of primary accountability to self and students. Different cultures and locations may have no noticeable impact on teachers' perceptions of to whom they are accountable.

As with items of "for what" they are accountable, teachers' perceptions of "to whom" they are accountable may also be viewed in the light of teacher isolation. In the isolated classroom environment, "self" and "students" are the primary foci (Sarason, 1971; Lortie, 1975; Lieberman and Miller, 1984). Colorado teachers responded to this question from a personal focus of self. The responses moved in a linear fashion from self, to the students who share the same isolated environment, to the groups having some direct influence on people in the environment, and lastly to groups perceived as being external to the environment. Interestingly, they did not identify "other teachers" as a group to whom they felt accountable, reflecting the strong sense of isolation which individual teachers have from peers.

3. Is there a relationship between what teachers felt they were accountable for and which indicators they feel should be included in a multiple indicator component of a state education accountability system?

Student achievement, student attendance and student behavior tested for this relationship because they appeared as items of internal accountability as well as in the indicator list for external accountability. When correlated separately with the elements of "in the classroom," "in

the building," "include in the PBAS" and "influence behavior if included," results indicated that there was indeed a relationship. As each indicator was considered in each environment, the further the indicator moved from the classroom environment, the lower the correlation.

The relationship reflected a combination of teachers' identification of "self" as the primary focus of accountability and the characteristic of isolation within the teaching environment. If the item is tied to the classroom, they perceived a high degree of accountability. As the item moves further from the classroom environment, the degree of perceived accountability diminishes. This finding parallels the conclusion for Research Question 1, where for all items, respondents reported that they were significantly more accountable for items within the classroom than they were for the same items within the building.

4. Is there a relationship between the degree to which teachers feel specific items should be included in a state education accountability system, and the degree to which they feel that inclusion would affect their behavior?

Results were analyzed for the PBAS components of multiple indicators, sanctions and rewards. Conclusions for each of these components are presented in the dual frameworks of teacher isolation and primary accountability focus of "self."

Indicators

A definite pattern was visible in the results for the eighteen indicators presented in the instrument. Seven of the eight indicators with the highest mean scores showed a positive mean difference between "include in system" and "influence behavior if included." The seven indicators are achievement – local, staff development, teacher attendance, student demographics, student attendance, achievement – state, and ACT and/or SAT scores. These positive differences suggest that they agreed with including the indicator in the system to a higher degree than they believed the inclusion would influence their behavior. The remaining eleven indicators, which

included such items as dropout rate, graduation rate and percentage of students taking AP courses, yielded the opposite result. Each showed a negative mean difference between "include in system" and "influence behavior if included." Respondents appeared to be more in favor of including indicators in the PBAS over which they had some direct control and less in favor of including ones that would influence their behavior.

In addition, of the seven indicators identified as being a part of the Colorado PBAS, only student achievement – local and student achievement – state showed positive mean differences. The rest of the Colorado indicators showed a negative mean difference, indicating that five of the seven would be likely to influence their behavior more than they agreed these five should be included. It remains to be seen what type of influence that including these indicators in the 2000 accountability policy will have on their behavior and whether there will be a positive or negative behavior change.

From the viewpoint of primary focus of "self," any indicator from an external system would be acceptable only if the influence on personal behavior were perceived to be minimal. This would then result in a positive mean difference for the acceptable indicator. If, however, respondents reported a negative mean difference for indicators they felt strongly should be included in the PBAS, they would in essence have agreed to the control of an external accountability measure. This would then seem to contradict the teacher isolation framework. The isolated classroom is the place in which they believe they have control, rather than the external PBAS environment.

Of the indicators showing the highest mean scores, respondents favored only two of the seven indicators most often used in state PBAS across the United States. These are student achievement and student attendance. Also included in this list of indicators were staff

development, teacher attendance and percentage of teachers working in area of certification (see Table 7). Interestingly, none of these three teacher indicators are in the Colorado PBAS.

The means presented for teacher indicators in Table 8 show a stronger preference for including staff development and teacher attendance than for the percentage working in their area of certification. The standard deviations reveal greater agreement among respondents regarding the inclusion of these indicators than regarding the potential influence on behavior.

Table 7

Teacher Indicators from Top Eight Indicators Identified in the Study

	Include in System		Influence Behavior	
Item	Mean	Std. Dev.	Mean	Std. Dev.
Staff development	4.42	0.89	3.15	1.30
Teacher attendance	3.83	1.05	2.97	1.34
% of teachers working in area of certification	3.59	1.11	3.90	1.30

The strong agreement with having staff development as an indicator is not particularly surprising. This may reflect teachers' support for professional development to assist in the adoption of standards, or it may simply indicate familiarity with a term integral to the teaching environment. Currently, there is general lack of valid, reliable indicators that may be used as accountability measures for teacher characteristics. Since not all subject areas are tested using state assessments, student achievement scores cannot be used as a fair measure for all teachers. If teachers constitute a group that is to be held accountable by the PBAS, there must be valid and reliable measures specific to both teachers as a group and as individuals.

Sanctions

Although the purpose of sanctions is essentially to foster improvement, usually by offering a range of assistance and sanctions that allows schools both the opportunity and capacity

to improve, they are generally perceived as "sticks" to mandate or motivate change. Table 8 presents sanctions listed in the instrument and teachers' responses in rank order by overall means. The first column of means shows the degree to which teachers agreed that each level of sanction should be included in the PBAS; the second column indicates the degree to which they believed the inclusion would affect their behavior.

Table 8

Sanctions for PBAS

	Include in PBAS		Influence Behavior If Included	
Level of Sanction	Mean	Std Dev	Mean	Std Dev
(3) Probation – failure to implement plan to remedy lack of compliance with accreditation plan (Level 2 in Colorado) * **	3.92	1.09	2.80	1.49
(4) Removal of accreditation (Level 3 in Colorado)*	3.76	1.22	3.03	1.49
(7) Reorganization of school district*	3.66	1.04	2.97	1.51
(1) Written warning that district is out of compliance with its accreditation contract (Level 1 in Colorado) * **	3.52	1.16	2.11	1.35
(8) Take-over of school district by state	3.49	1.19	3.17	1.50
(5) Withholding of state education funding	3.48	1.27	2.99	1.62
(2) Formation and implementation of district plan to remedy lack of compliance *	3.17	1.27	2.90	1.59
(6) Reconstitution – removal and replacement of school personnel	2.97	1.34	3.24	1.58

* Sanctions listed in Colorado statutes

** An accreditation contract is defined as a contract between a school district and the state board of education that defines the standards, goals, and requirements to be met by the district over the term of the contract.

Note: The numbers in parenthesis indicate original order of severity listed in survey instrument. Although the survey instrument listed the levels in order of least to most severe, teacher responses did not follow that order.

The analysis of levels of sanctions produced the same results as for indicators. The responses again came from the accountability focus of "self" operating in the isolated classroom environment. The levels of sanctions not perceived as directly affecting individuals were preferred above those having direct impact on individual teachers. For instance, issuing a written warning that a district is out of compliance with its accreditation contract or placing a school on probation if it failed to improve may be perceived as affecting the entire teaching staff. However, these sanctions may be seen as being rather impersonal by individual teachers.

State takeover of a district or school is also an interesting example. Although this sanction may be considered by policymakers to be the most extreme level available, respondents placed state takeover higher in the rank order than the sanction of formation and implementation of a district plan. A state takeover offers an uncertain, indefinite scenario. The actions taken during a takeover may vary with the school or district, depending on the nature of the persistent problem or problems that brought the sanction. Additionally, since the sanction of state takeover is not an option under Colorado policy, respondents may have felt less threatened by this particular sanction and therefore rated it higher for inclusion in the PBAS.

Respondents reported, however, that they favored a state takeover more than the formation and implementation of a district plan. This is not surprising when considering the response in light of the accountability focus of "self." Creating an improvement plan is a level of sanction that could directly affect both their personal time and time spent with their students. States generally require school personnel and community members to be involved in creating and implementing a school improvement plan. Involvement for teachers would require extensive and laborious committee work to form the plan as well as disruption of regular classroom practice to implement the plan's features.

The level of sanction least favored by respondents was reconstitution. Ziebarth (2000) stated that " . . . a school reconstitution involves hiring new staff, creating a new philosophy and developing a new curriculum at a given school" (p. 4). This severe sanction typically requires replacing principals and teachers. Faculty and administrators may usually reapply for positions at the reconstituted school, and those with tenure/continuing contract may have the option of transferring to another building within the district. If they reapply for a position at the reconstituted school, there is no guarantee that they will be rehired. This immediate disruption of all employees and the potential loss of employment would have a very personal impact on teachers and classrooms. Teachers may also believe that reconstitution alone will do little to improve student learning.

Reconstitution was also the only level of sanction resulting in a negative mean difference for all respondents. That is, teachers did not favor including reconstitution in the sanctions component, but they indicated that it would influence their behavior. If fear of sanction is seen as an incentive (that is, one that would produce the desired effect if applied), reconstitution might prove to be a very large "stick" in the "carrot or stick" metaphor. Policymakers may prefer having reconstitution in a PBAS if it can be shown to be an effective deterrent that is also organizationally and financially viable. However, if a sanction is proven to destroy more of the organization than it corrects, to hold little promise for improving student achievement, and/or to cost more to implement than available funds allow, then it is not an effective policy option.

Rewards

For purposes of this study, rewards are defined as monetary awards granted for student achievement gains. Rewards may be given to individuals, teams, schools or districts. They are currently mandated in statute in over 17 states.

First, respondents agreed with including a rewards component in the state PBAS. They also indicated that rewards should be included to a greater degree than they felt this policy would influence their behavior. These results seem to disagree with prior findings that teachers tend to favor intrinsic over extrinsic rewards (Lortie, 1984; Johnson, 1986; Hoy & Miskel, 1991).

Second, respondents were asked to what degree they thought different groups should be included as reward recipients. State policy in several states (i.e. Texas, South Carolina, Indiana, Kentucky) designates entire schools as recipients, with the intent that all school personnel should be held accountable for student learning. However, respondents ranked "entire school" fourth in a list of five. They indicated a preference for "groups of schools," appearing to rely on those outside the immediate environment to help produce necessary growth in student achievement to merit the reward rather than colleagues internal to their building.

Finally, they were asked about individuals as reward recipients. Teachers indicated that they least agreed with having individual teachers of all possible groups to be recipients. This finding appears to agree with prior research that teachers tend to favor intrinsic rewards over extrinsic rewards (Lortie, 1984; Johnson, 1986; Hoy & Miskel, 1991). However, they did admit that having individual teachers receive rewards would influence their behavior more than directing rewards to other groups. The questions remaining are what would be that behavior change and would the change be perceived as positive or negative.

In summary, for those responding, teachers favored the inclusion of rewards in the PBAS. They also preferred "groups of schools" as recipients rather than their building colleagues. As individuals, they placed themselves last on the list of possible recipients, but indicated that giving rewards to individuals would influence behavior.

5. *Is there a relationship between teachers' perceptions of accountability and gender, level of professional experience, current building level assignment, years of experience as a teacher, district size and geographic area?*

Results indicated that the variance in the paired data could not be attributed to any of the seven demographic variables, except for building level in relation to sanctions. A Bonferroni post hoc test revealed that the significant results for building level for four of the seven sanctions are attributed to responses from elementary schools.

Frankly, this significance is insignificant. The fact that there was significant variance in the responses of elementary teachers to four levels of sanctions pales in comparison to the observation that none of the variance for all other items was attributable to any demographic. It would appear that "a teacher is a teacher is a teacher." It made no difference whether the respondents were male or female, how much teaching experience they had, what degrees they had earned, how long they had taught at their current assignment, what size their district was, nor where in the state they taught. Their perceptions of accountability did not significantly vary by any of these measures. The isolated environment in which they teach and the primary accountability focus of "self" did not appear to be altered in any substantial way by personal situation or geography.

Conclusions and Recommendations

The following conclusions reflect the data analysis and, in many cases, related research:

- Teachers are more accountable for items under their direct control (e.g. curriculum, learning climate, student achievement) than for items they may influence but not control (e.g. parent involvement, student attendance).
- Teachers are more accountable for items in the classroom than for those same items in the building.

- Teachers are first accountable to themselves, second to their students, next to groups who affect classrooms (e.g. principals, other teachers) and finally to external groups (e.g. all government levels, community organizations).
- Teachers view the accountability indicators of student achievement, attendance and behavior from a primary focus of "self" or internal accountability more so than from the external accountability of the state PBAS.
- An indicator included in the state PBAS is acceptable only if the influence on personal behavior or "self" is perceived to be minimal.
- Levels of sanctions that do not affect individual teachers (e.g. probation, written warning) are preferred above those having direct impact (e.g. reconstitution).
- Teachers favor the inclusion of rewards but they may not influence behavior.
- Teachers are most influenced by rewards if individuals are beneficiaries.
- Teachers favor indicators in a PBAS that do not influence their behavior and are less in favor of including ones that would influence behavior.
- Teachers' perceptions of accountability do not depend on demographic characteristics. Regardless of gender or years of experience, teachers in all sizes of districts and all levels of schools respond similarly to accountability issues.

In conclusion, teachers view accountability from a primary focus of "self" from within the isolated classroom environment. Although their highest sense of accountability is being accountable to themselves, they are nearly equally accountable to their students. This finding mirrors studies of teachers in Ohio (Cullen & Altshculd, 1994) and in French and British schools (Broadfoot, et al., 1987).

The focus and content of accountability policy have changed greatly over the past two decades. However, teachers' personal focus of "self" and "student" and their isolated classroom environment have remained essentially the same. State accountability policies have had little impact on altering either the focus of teachers or the isolated culture in which they work. Moreover, we do not know if the accountability policies themselves have been effective in accomplishing their goal of improving student learning. If further research finds that existing accountability policies are effective, there is no need to change the culture. However, if we find that the policies have not been effective and have not altered the isolated environment or the focus of adults in that environment, then policies must be created that will be effective within that environment and focus.

The professional landscape of teaching remains one of isolation. Teachers' perceptions of accountability are based in the isolated world of the classroom with themselves and their students. They profess a strong sense of personal, internal accountability to themselves and their students. This viewpoint of personal accountability remains their initial point of perception when viewing the external accountability of the PBAS. This is particularly evidenced by (1) their desire to have indicators such as staff development included in the multiple indicator component, (2) their reticence to have reconstitution be a sanction, and (3) their admission that, although they put themselves last on the list of preferred reward recipients, receiving rewards would potentially change their behavior.

Is this isolation good or bad? It certainly can foster a sense of community or "family" within the classroom for both student and teachers, but it also diminishes the flow of knowledge and assistance from outside the classroom. Moreover, what does policy implementation look like in this isolated environment? State policy is designed to flow from the legislature to the

state department of education to districts and ultimately to schools. But if the working environment is the isolated classroom, how does policy "get in?" If school culture needs to be altered to allow the policy into classrooms, what mechanisms can be used to precipitate that change? Can a desired cultural change result from legislative mandate or incentives?

According to this study's results, the answer is "no." Teachers perceive a very low sense of accountability to all government levels. The further away from "self" any item or indicator is perceived as being from the classroom, the less the sense of accountability. In light of this, the possibility of the policy changing school culture is even more limited. If the policy cannot change the culture, then it must be created to work within the culture. Policymakers must begin to consider the perceptions of all players affected by state performance-based accountability systems, particularly the teachers who work in the classroom with the students who generate the primary data for the system.

Based on findings and conclusions discussed above, there are several recommendations for policymakers to consider. First, policies should hold teachers accountable only for those items or indicators over which teachers have some control (e.g. learning climate, curriculum). Second, if teachers are to held accountable through a PBAS, teacher indicators must be developed that are fair, valid and reliable – and they must be perceived as such by teachers to be effective within the PBAS. Finally, accountability policy will be more effective if it is created specifically to work within the prevailing culture of schools. The perceptions of all stakeholders affected by a PBAS, including teachers, must be considered in policy formation.

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