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ABSTRACT

Few of the empirical studies on school restructuring adequately describe the role of site teams in school reform. This paper addresses this gap, an analysis of what site teams do, how they are configured, and how they operate. This paper presents empirical measures of variables relating to the decision-making and communication practices engaged in by site-based teams and uses these variables in a model to predict significant outcomes of site-based decision making. The paper reports the results of a study that used path analysis to test the relationship among resources provided to site councils and analyze communication and decision-making practices and perceived outcomes. The study's sample includes data from site-based council members in 50 schools in New York State. The results, with respect to the support factors that are identified in the study, suggest that the devolution of power from traditional authorities to site-based teams, which is intended with school-site management, may result in the enhanced influence of these teams. What site teams do with this influence, whether it results in better decision-making or improvement in teaching and learning, depends on what happens at the school site and on how the site-based teams practice site-based decision-making. (Contains 32 references.) (RJM)

Modeling Site-Based Decision Making: The Relationship between Inputs, Site Council Practices, and Outcomes

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At best, there is mixed evidence regarding whether restructuring decision making can fulfill the promise of promoting school improvement (Ogawa and White, 1994; Malen and Ogawa, 1992). Studies seldom show *explicit* connections between the implementation of site-based management and student performance and achievement (Cohen, 1988; Murphy and Beck, 1995; Taylor and Bogotch, 1994), and there is mixed support for the connection between devolution and *intermediate benefits* such as staff morale or increased stakeholder influence in decision making (see, for example, David, 1989; Lindquist and Mauriel, 1989; Malen, Ogawa, and Kranz, 1990b). In many cases, the available research concludes that districts and schools seldom fully implement site-based systems (Marsh, 1994; Wohlstetter and Odden, 1992) or consider fully what it takes to make the transition from traditional decision making structures to decentralized ones (Glickman, 1990). Issues of "insufficient capacity" are often cited as explaining the failure of site-based management; "capacity" refers to district support for site-based councils in terms of providing authority, training, time, information and other resources necessary to ensure successful site team operations.

In much of the research literature, the actual *process* of site-based decision making is treated as a "black box" (Sharpe, 1996). Even as scholars recommend that the emphasis of research must shift to a focus on site-based management as *a process to be designed* rather than as a simple program that school systems implement (Mohrman, 1994; Wohlstetter and Mohrman, 1994), there is no commonly accepted

vocabulary for describing site-based management systems thoroughly in terms of their design (Bauer, 1998). Theoretical models suggest a logic of action that connects involving stakeholders in decision making ("involvement") or implementing site-based management ("SBM") to a complex web of processes and outcomes (see, for instance, Murphy and Beck, 1995; Malen, Ogawa and Kranz, 1990b). Left unspecified, however, are the actual practices of "involvement" in site-based management, i.e., few empirical studies describe exactly what site teams do, how they are configured, or how they operate.

In this paper, we attempted to address this gap in the research, first, by presenting empirical measures of variables relating to the decision making and communication practices engaged in by site-based teams, and second, by using these variables in a model predicting significant outcomes of site-based decision making. Specifically, building on earlier work, this paper uses path analysis to test the relationship between the **resources** provided to site councils (e.g., administrative support for site-based management, time, training), **communication and decision making practices**, and **perceived outcomes** (e.g., effectiveness of site-based management in enhancing stakeholder influence). The hypothesized model treats variables relating to resources as antecedent factors and those relating to practice as intermediate factors, each contributing to perceived outcomes.

Prior research

Too often, theory and research on site-based decision making presents models and findings in terms of abstract constructs (e.g., empowerment) to describe what is

more accurately accepted as a complex and multi-factored process. Researchers seldom discuss the details of site-based decision making at the level of practice (Bauer, 1996), and further, the literature lacks a vocabulary to discuss the details of site-based practice, resulting in an inability to create meaningful models that truly reflect the complexities of practice. Instead, site-based management is deemed to be `too complex' to operationalize (Malen, Ogawa, and Kranz, 1990a; Wohlstetter and Odden, 1992).

The history of our empirical investigations began with a conceptualization of site-based decision making offered by Shedd (1987), and later Shedd and Bacharach (1991), who described collaborative decision making processes in terms of four broad dimensions: (1) **scope**, referring to the range of issues site council participants discuss; (2) **formal structure**, including composition and representativeness of site teams; (3) **decision making process**, dealing with how site teams make decisions, and, (4) **support**, referring to issues typically regarded as "capacity," i.e., administrative support, information, time, training, and other resources. These four dimensions were not empirically tested, however, nor was the embedded logic or sequence among these dimensions specified. The framework treated them as four equally important dimensions for describing the design and practice of site-based management.

Both measurement issues were addressed subsequently by Bauer (1996, 1997), who first developed empirical measures of Shedd's dimensions, and hypothesized that the dimension related to **support** should be considered separately

from **scope, structure** and **process**. Specifically, he postulated that **support** deals with the *resources provided to* site teams and is associated with the institutional context of site-based management, while **scope, structure** and **process** deal directly with the *communication and decision making practices* engaged in by site teams. Conceptually, this was consistent with Weiss's (1995) treatment of the institutional context and culture as distinct from the internal processes described as information, ideology and interest; Murphy and Beck's (1995) conceptualization of school / organization context as separate from decision actors, process and content; and recent empirical work on reculturing by Wonycott-Kytle and Bogotch (1997), who differentiate between the stability of administrative roles / support and the continuous reflecting on, questioning of, and development of teaching and learning practices.

Using these survey measures, Bauer (1997) operationalized factors associated with scope, structure, process and support, and then presented the results from regression analysis testing whether the dimensions had predictive power in explaining perceived outcomes relating to the effectiveness of site-based management. The findings confirmed the hypothesis that the factors relating to the internal workings of site councils, that is, practice variables of **scope, structure**, and **process,** explained effectiveness when controlling for the more often-cited predictors of site-based management outcomes, issues relating to administrative **support**. When all four of the dimensions were entered into regression equations together, the three factors relating to practice proved to be more robust than those relating to **support** (i.e., the "capacity" and resources received by site-based teams).

While this analysis affirmed the importance of internal practice variables, we could not ignore the general consensus in published literature regarding the importance of the resources available to site teams and the common sense notion that issues relating to site team capacity affects their performance. Thus, in spite of the regression results, it seemed unlikely that site-team resource factors would be unrelated to perceived school-based management effectiveness outcomes. Logically, we proposed that both resource factors and measures relating to site team practice may themselves be related, or they may be related to common antecedent variables not included in the original model, thereby explaining why the multiple regression analysis failed to provide an adequate assessment of the model.

Therefore, using the same data, Bauer and Bogotch (1997) developed and tested a path model relating the resources provided to site teams (**support**) and measures of site team practices (**scope**, **structure**, and **process**) to effectiveness outcomes commonly associated with site-based decision making. The results of the path model showed that factors relating to the internal practices of site-based councils had significant *direct effects* on effectiveness outcomes, while the factors relating to the resources provided to site-based teams did not. However, the latter factors measuring **support** as *capacity* and *authority resources* had significant indirect and total effects on perceived effectiveness, indicating that they influenced outcomes through the factors relating to site team practices.

At this stage of the research, we looked for reasons why the path model's results were statistically significant, particularly questioning the consistency of

results across models relating to different measures of effectiveness. Two aspects of the research seemed suspect. First, the data used in both the regression and path analysis were from a single district, and thus we are reluctant to generalize about results. Second, certain gaps in the survey itself were identified as a part of the survey feedback process. Specifically, the measures of site team practice did not include items relating to evaluation of decision making, nor did the measures of support sufficiently tap perceptions relating to training and staff development.

This study addressed these deficiencies by (1) replicating the path analysis on a larger, more heterogeneous data set from multiple school districts, and (2) revising the survey instrument to include additional items relating to the areas previously left out. Thus, the purpose of this study was to retest the revised school-based decision-making model on a new sample, and assess the adequacy of the model across studies.

Methodology

Sample

The present sample included data from site-based council members in 50 schools from a total of fifteen school districts in upstate New York.[1] The school districts involved in the study were invited to participate in the research as part of a state-mandated evaluation of the implementation of shared decision making. Each district was affiliated with one of two intermediate service agencies; although these agencies were located in separate parts of the state, they shared common demographic characteristics, in particular, their member school systems included one larger, urban district surrounded by much smaller suburban and rural districts. As for

the fifteen districts involved in the sample, two were small, urban districts and thirteen districts were classified by the state as suburban.[2] The districts ranged in size from an enrollment of 8,500 students in ten schools, to a low of approximately 800 students in two schools, with an average enrollment of 2,775.

All site council members were surveyed, including staff, parents, and community members. A total of 367 usable surveys were returned from the approximately 540 distributed, for a response rate of 68%. Of the 50 school site teams involved, eighteen were secondary schools and 32 were elementary schools, and each team was completing its second year of existence.

Revised Scale Development

Factor analysis was used to determine how the survey items measured site team practices and support. Additional survey items were developed and pretested to address the gaps identified in prior research, i.e., questions dealing with the evaluation of decision making, training, and staff development. (To distinguish the new survey items from those used in prior studies, new items are italicized.) Since the addition of new items may fundamentally alter the pattern of factor loadings among the component items of the scales, we had to reconceptualize our measures based on the results obtained here. Principle components analysis was conducted with varimax rotation; factors with eigenvalues greater than one were constructed using SPSS 7.5.

Support factors

Site council members were asked to rate the adequacy of various conditions

that may affect the work of the site council. The four point Likert scale was 1=very adequate, 2=somewhat adequate, 3=somewhat inadequate, 4=very inadequate. In the prior study using a sample obtained from a single, urban school district (Bauer & Bogotch, 1997), the factor analysis of the **support** items emerged as three independent factors labeled **council capacity, upper-level administrative support,** and **authority resources**. Capacity measured those resources controlled at the school-site, including time and those few items relating to training; upper level administrative support measured the adequacy of support from upper-level school system officials; and authority resources represented items relating to the adequacy of decision making authority devolved to the school.

In the present study, all items contained in these three factors are included in the analysis. Additionally, two items related to training and staff development resources were added to the new survey, as well as an item asking respondents about the adequacy of support from the teachers' association, again added based on feedback received from respondents. The results of the factor analysis were different from the previous study; that is, in the context of the new items and in this multi-district sample, new factor patterns emerged. The first factor included eight items relating to **administrative support:**

a. Support from the school board.

b. Support from the superintendent.

c. Support from central administration in general.

d. Support from the teachers' association.

e. Support from building administrators.

f. The clerical support the team receives.

g. The site team's authority to decide what issues it will address.

h. The site team's authority to implement decisions.

Note that support from upper-level administrators, building administrators, and from the teachers' association loaded onto the *same* factor, along with two items relating to the authority resources which site teams receive from their school systems. It appears that from the perspectives of site team members, administrative support regardless of the source is a single factor, and authority is a form of administrative support provided to the team from their school systems.

The second support factor included the following five items, and was labeled **training:**

i. The team-building and consensus-building skills of those who facilitate or lead team meetings.

j. Team members' skills in communication and decision making.

k. The team's access to information it needs to make decisions.

l. The training the team received in decision making, planning, and communication skills.

m. The staff development resources available to implement team decisions.

Here, the **training** resources include access to training and staff development, site team members' skills, and access to information. The emergence of a separate, but

comprehensive training factor lends some justification for adding the new items, and seems more consistent with the treatment of this important resource in the literature on site-based management and team processes.

The third support factor to emerge included the three items relating to **time** as a resource provided to site teams for various activities:

n. The time available for the site council to meet.

o. The time available to communicate with others about council decisions.

p. The time available to implement council decisions.

Again, it makes sense that time resources would represent a discrete factor rather than load as part of a more global measure.

Finally, two items relating to a specific kind of school-level support emerged as a separate factor:

q. Support from staff members not on the team.

r. The recognition and respect site team members receive for their efforts.

We labeled this factor **recognition** because it connects the work of the site team to the school community as a whole.

In summary, several items were added to the survey relating to the resources provided to site teams, and the pattern of factor loadings among the component items showed a different pattern from previous studies. Four discrete factors emerged: **administrative support, training, time,** and **recognition**. As a group, they

measured the perceived adequacy of various resources the school system provides to support site-based decision making.

Site team practices

To measure decision making and communication practices, site council members were asked to rate the accuracy of various statements about their school site team on a Likert scale ranging from 1=very accurate, 2=somewhat accurate, 3=somewhat inaccurate, to 4=very inaccurate. In Bauer and Bogotch (1997), we confirmed the hypothesis that three separate factors existed measuring site team **practice**, which related to **scope, structure,** and **process.** In the present study, all of the items included in these three factors were included on the survey, augmented by several items relating to under-represented issues identified in the survey feedback process. As with the support factors presented above, in the context of the new items and in this multi-district sample, new factor patterns emerged. The new items are in italics.

Three factors emerged from the factor analysis, the first measuring **scope,** which included the following items:

a. Site team members and those in authority agree on what kinds of decisions the team may and may not make.

b. Site team members have a clear sense of the goals they want to achieve.

c. *The site team focuses its attention on issues relating directly to the improvement of student performance and achievement.*

d. Site team activities and those of other committees are well coordinated.

e. *The site team evaluates the impact of its decisions on student performance and achievement.*

f. The site team has real influence on issues of importance.

As in the original definition of **scope**, the items addressed goal consensus and the perceived influence of site teams; however, two new items both pertaining to school improvement loaded on this factor -- the first dealt with student performance and achievement as the site team's focus, and the second dealt with the evaluation of site team activities also in relation to student performance. In addition, the item related to coordination of site team activities with other school committees loaded as part of the new meaning of **scope.**

The second practice factor included many of the items previously labeled as structure, but several new items now loaded with this factor, thus, leading to a different pattern of practice:

g. *Members work to implement decisions once they have been made.*

h. *Members work to correct problems that arise during implementation of team decisions.*

i. The site team makes effective use of research bearing on issues it addresses.

j. The site team is creative in how it addresses issues.

k. The site team keeps those who might be affected by decisions

informed of its progress.

l. The site team gives those who might be affected by decisions opportunities for input.

m. The site team membership is representative of the staff and school community.

n. The site team takes responsibility for its decisions, even when they turn out to be unpopular with some people.

o. *The site team monitors and evaluates how its decisions are being implemented.*

p. *The site team periodically evaluates its decision making and communication process.*

Not only did these items touch upon the composition or structure of the site team, but now this factor included a broad range of decision-making and implementation practices; thus, we chose to label the factor **decision-making practices.**

The third and final practice factor to emerge included the following six items:

q. Members of the site team listen to each other and are prepared to change their opinions.

r. Members of the site team trust one another.

s. All members of the site team have an equal opportunity to be involved in decisions.

t. Site team members communicate openly and honestly during meetings.

u. Even when members disagree, they focus on what they believe to be best for students.

v. Members support site team decisions outside the council meetings.

This factor described the nature of internal communications among council members specifically. Whereas the communication items which loaded on the **decision-making practices** factor above had to do with the council's communication with others at the school and the implementation of decisions, here communication is delimited to the dynamics inside the council itself. For this reason, we label this factor **trust**.

In summary, as a first step in the replication study and test of the school-site decision making model, we found new and different measurement scales for the dimensions of **support** and **practice**. This does not mean that the previous findings from our research in a single, urban, mid-western district were inaccurate. Rather, the differences reflect the importance of context and units of analysis, that is, the difference between a sample from one school district versus a sample from 15 school districts, and the need to interpret results by looking across studies. We will return to this important methodological issue in our conclusions.

Outcome measures

With respect to outcome measures, no changes were made in any of the survey items. Both the previous single, urban district study (Bauer and Bogotch, 1997) and the present study relied upon the respondent's self-report of the effectiveness of site-based decision making and their satisfaction with their districts'

program. We readily acknowledge the limitations of such proxy measures of effectiveness, but the survey items themselves reflected the widely cited benefits of promoting trust and enhancing stakeholder influence, as well as explanations relating to improved quality of decisions, innovation, and educational services (see, for example, Murphy, 1991; Glickman, 1993; Hill, Bonan, and Warner, 1992; Malen, Ogawa, and Kranz, 1990b; Murphy and Beck, 1995). Respondents rated the effectiveness of site-based management in terms of the various outcomes as 1=very effective, 2=somewhat effective, 3=somewhat ineffective, and 4=very ineffective. In both studies, three factors relating to effectiveness emerged. The first factor, **effectiveness in providing influence,** included the following three items:

a. Providing those who are directly involved on teams influence over decision-making.

b. Providing teachers and other school staff influence over decision-making.

c. Providing parents influence over decision-making.

The second factor dealt with **effectiveness in improving decision making,** and included the following three items:

d. Promoting cooperation and trust among administrators and school staff.

e. Resolving problems that affect teaching, working, and learning conditions.

f. Enhancing the quality of decisions made in the school.

The third and final effectiveness scale addressed **effectiveness in improving educational services**, which included the following three questions:

g. Promoting innovation

h. Satisfying public expectations for reform.

i. Improving the education that students receive.

Two additional outcome items were included in the survey, describing respondent's perceived **satisfaction with site-based decision making**. These were considered to be summary variables. The specific questions were, 1) Overall, how satisfied are you with your site-based team's performance?, and 2) Overall, how satisfied are you with the district's site-based decision making program? These variables were rated on a ten point scale, with one representing "very satisfied" and ten representing "very dissatisfied."

Table 1 presents the number of valid responses, means, and standard deviations for the support, practice, and effectiveness outcome measures. For each scale, Cronbach's alpha was computed and is included on this table.

TABLE 1 -- DESCRIPTIVE STATISTICS OF RESOURCE, DESIGN AND OUTCOME MEASURES

	n	item mean	standard deviation	Cronbach's alpha
Support Factors: Respondents rated the adequacy of various resources along a four-point scale, 1=very adequate, 4=very inadequate				
Administrative support (8 items)	323	1.89	.85	.8939
Training (5 items)	342	1.88	.79	.8294
Time (3 items)	360	1.90	.77	.7806
Recognition (2 items)	348	2.20	.76	.7585
Practice Factors: Respondents rated the accuracy of various statements relating to site team practice along a four-point scale, 1=very accurate, 4=very inaccurate				
Scope (6 items)	333	1.95	.79	.8308
Decision making practices (10 items)	326	1.65	.68	.8848
Trust (6 items)	348	1.52	.67	.8746
Effectiveness Measures: Respondents rated the effectiveness of SBDM at promoting various outcomes along a four-point scale, 1=very effective, 4=very ineffective				
Providing influence (3 items)	349	2.04	.83	.8713
Improving decision making (3 items)	349	2.10	.83	.8669
Improving educational svces (3 items)	340	2.26	.87	.8678
Satisfaction Measures: Respondents rated their satisfaction with their site team and with their district's program along a ten-point scale, 1-very satisfied, 10=very dissatisfied				
Satisfaction with site team	360	3.82	2.36	--
Satisfaction with program	359	5.02	2.50	--

Model and Statistical Analysis

To test the relationships between **support** factors, factors relating to site team **practice,** and perceived **outcomes**, we developed a path model treating support factors as inputs and factors relating to site team practice as intermediate variables, each contributing to the perceived outcomes of site-based management (see Figure 1). PLSPath (Sellin, 1989) was used to test the path model. PLSPath uses a partial least-squares approach to estimate the parameters of the path model, and employs a Jacknife subroutine that omits one case at a time (blindfolded) to re-estimate the model parameters on remaining cases. The output shows path coefficients, Jacknife path coefficients, standard errors, and R^2 values for each equation in the model. Partial least-squares has the advantage over other path analysis methods in that no assumptions need be made about the nature of the underlying distributions of observed and latent variables (Sellin, 1989).

PLSPath requires that the data set have no missing values, thus we replaced missing data using mean substitution. It also requires the use of standardized variables, thus z-scores were computed for purposes of this analysis. SPSS-PC was used to conduct the factor analyses and prepare the data set prior to using PLSPath.

Separate path analyses were computed for each of the five outcome measures (effectiveness at providing influence, effectiveness at improving decision making, effectiveness at improving educational services, satisfaction with council, and satisfaction with program). Stability of the models was examined by checking tolerance scores computed by PLSPath as an indicator of possible collinearity

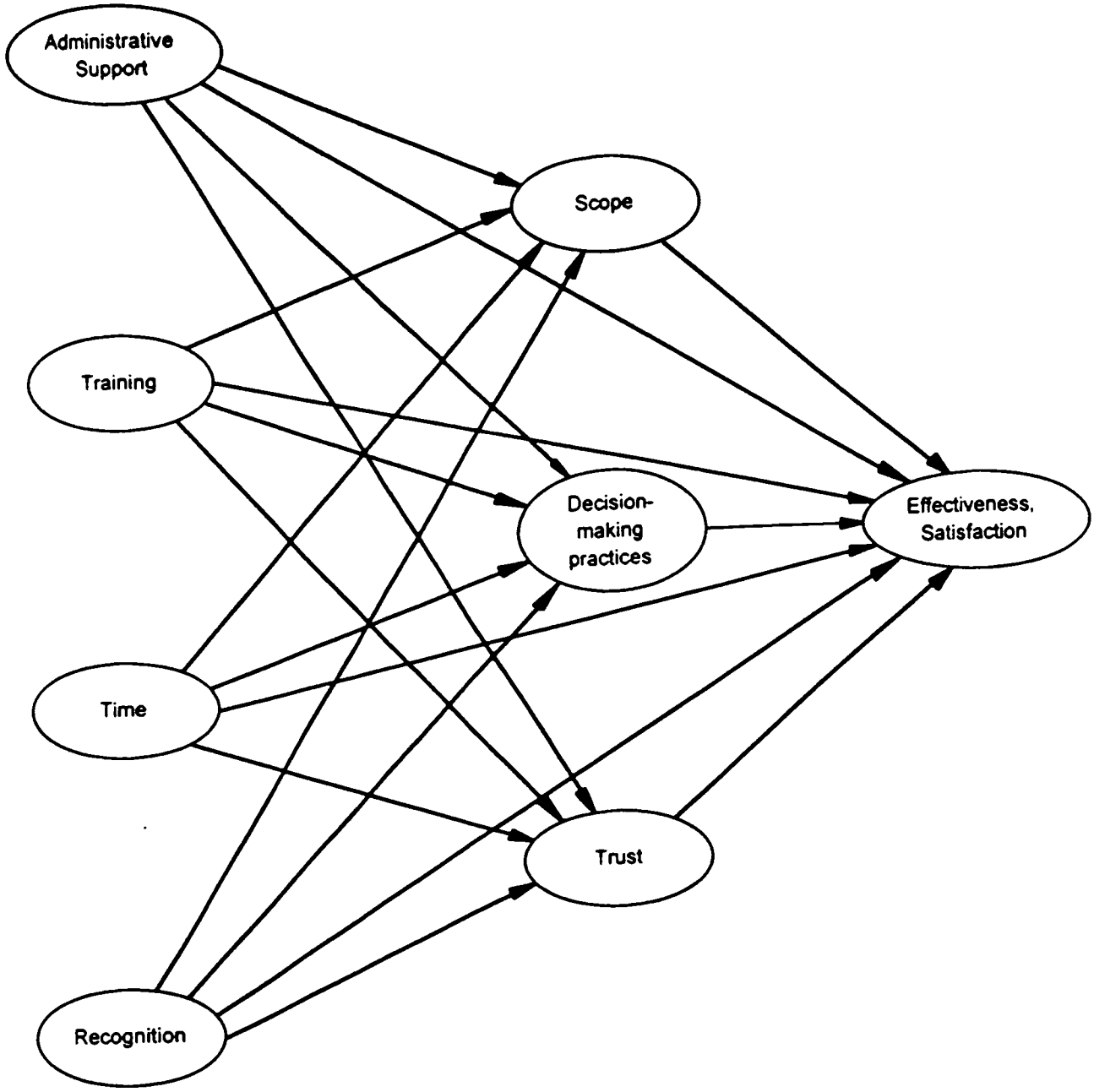

FIGURE 1: PATH MODEL

problems, and by comparing results of the initial parameter estimates with Jacknife statistics.

Results and Discussion

Table 2 provides a summary of the results of the analysis testing the path model. Specifically, equations one through three show the effects of the support variables regressed on the factors relating to site team decision making and communication practice, and the remaining equations show the direct and indirect effects of each of these factors on the five outcome measures.

In our previous study of a single urban school district (Bauer & Bogotch, 1997), a measure labeled *council capacity* emerged as a significant predictor of *scope, structure, and process*, but *administrative support* and *authority resources* only emerged as significant in predicting scope. In this multi-district study, a more practice-oriented pattern emerged. Equation one indicates that all four of the support factors are significant predictors of **scope**, meaning that **administrative support** (beta=.23), **time** (beta=.31), **training** (beta=.34) and **recognition** (beta=.20) contribute to issues of goal consensus and decision making efficacy. Equation two indicates that **training** (beta=.33), **time** (beta=.22), and **recognition** (beta=.23), but not administrative support, are significant predictors of the measure relating to **decision-making practices**. Site team members do not perceive that administrative support in and of itself matters in terms of whether their team is effective in decision-making practices, even though the resources their team receives relating to time, training and recognition are important predictors.

TABLE 2 -- RESULTS: PATH ANALYSIS

Equation 1: Dependent Variable = Scope
R-squared = .304**

Independent Variable	Direct Effect	Total Effect	Correlation
Admin. Support	.23**	.23**	.23**
Training	.34**	.34**	.34**
Time	.31**	.31**	.31**
Recognition	.20**	.20**	.20**

Equation 2: Dependent Variable = Decision-Making Practices
R-squared = .21**

Independent Variable	Direct Effect	Total Effect	Correlation
Admin. Support	.08	.08	.08
Training	.33**	.33**	.33**
Time	.22**	.22**	.22**
Recognition	.23**	.23**	.23**

Equation 3: Dependent Variable = Trust
R-squared = .09

Independent Variable	Direct Effect	Total Effect	Correlation
Admin. Support	.13*	.13*	.13*
Training	.20**	.20**	.20**
Time	.08	.08	.08
Recognition	.14**	.14**	.14**

Equation 4: Dependent Variable = Effectiveness at Promoting Influence
R-squared = .23**

Independent Variable	Direct Effect	Indirect Effect	Total Effect	Correlation
Admin. Support	.26**	.02	.27**	.27**
Training	.23**	.03	.25**	.25**
Time	.25**	.02	.26**	.26**
Recognition	.10*	.02	.12*	.12**
Scope	.02		.02	.25**
Decision-making practice	.02		.02	.19**
Trust	.08		.08	.19**

Equation 5: Dependent Variable = Effectiveness at Improving Dec. Making R-squared = .24**				
Independent Variable	**Direct Effect**	**Indirect Effect**	**Total Effect**	**Correlation**
Admin. Support	.05	.10*	.15**	.15**
Training	.06	.16**	.22**	.22**
Time	.03	.13*	.16**	.16**
Recognition	.14**	.10	.23**	.23**
Scope	.37**		.37**	.44**
Decision-making practice	.02		.02	.09
Trust	.11*		.11*	.15**

Equation 6: Dependent Variable = Effectiveness at Improving Ed. Svces R-squared = ..23**				
Independent Variable	**Direct Effect**	**Indirect Effect**	**Total Effect**	**Correlation**
Admin. Support	.03	.12*	.15**	.15**
Training	.00	.23**	.23**	.23**
Time	.01	.18**	.19**	.19**
Recognition	-.01	.15**	.13**	.13**
Scope	.40**		.40**	.41**
Decision-making practice	.22**		.22**	.23**
Trust	.11*		.11*	.11**

Equation 7: Dependent Variable = Satisfaction with Team R-squared = .56**				
Independent Variable	**Direct Effect**	**Indirect Effect**	**Total Effect**	**Correlation**
Admin. Support	.02	.15**	.16**	.16**
Training	.23**	.24**	.48**	.48**
Time	.07	.19**	.26**	.26**
Recognition	.16**	.15**	.31**	.31**
Scope	.46**		.46**	.59**
Decision-making practice	.12*		.12*	.25**
Trust	.24**		.24**	.32**

Equation 8: Dependent Variable = Satisfaction with Program R-squared = .46**				
Independent Variable	**Direct Effect**	**Indirect Effect**	**Total Effect**	**Correlation**
Admin. Support	.39**	.07	.47**	.47**
Training	.22**	.12*	.34**	.34**
Time	.08	.10	.17**	.17**
Recognition	.14**	.07	.21**	.21**
Scope	.28**		.28**	.50**
Decision-making practice	.02		.03	.17**
Trust	.06		.06	.18**

Equation three shows that **administrative support** has a weak but significant impact on the **trust** factor (beta=.13), whereas **training** (beta=.20) and **recognition** (beta=.14) emerge as significant predictors. The picture presented here is that trust among members of the site council depends most on the adequacy of training resources, and to a lesser extent on recognition and administrative support. Time resources did not emerge as a significant predictor, though, probably because this factor measures time resources that are related to external relations such as time to communicate with people not on the team or time to implement decisions rather than issues more central to within-team communication.

Equations four through six show the results for the analyses relating to the outcome factors measuring the perceived effectiveness of site-based decision making. Equation four indicates that all four **support** measures have a significant effect on the **perceived effectiveness at promoting stakeholder influence** while none of the **practice** measures emerge as significant. Specifically, **administrative support** (beta=.26), **training** (beta=.23), **time** (beta=.25), and **recognition** (beta=.10)

each have a significant, direct effect on this outcome. Clearly, when it comes to the effectiveness of site-based decision making at promoting enhanced influence of various stakeholders, **support**, rather than **practice,** is important.

Equation five indicates that only one of the support factors, that is, **recognition** (beta=.14), emerges as having a significant direct influence on **effectiveness at improving decision making**, while two practice factors, **scope** (beta=.37) and **trust** (beta=.11) emerge as significant predictors. **Administrative support**, **training**, and **time** have significant *indirect* and *total* effects, suggesting that their impact on improving decision making works through the practices related to scope and trust. That is, most of the resource factors affect the effectiveness of site-based decision making at improving decision making through their impact on site team practices relating to scope and trust.

Equation six shows the results relating to the factor most central to the improvement of teaching and learning, **effectiveness at improving educational services**. Here, all four of **support** factors have significant effects on the outcome, but only indirectly, whereas scope (beta=.40), decision making practice (beta=.22), and trust (beta=.11) have significant direct effects. This suggests that to have an impact on teaching and learning, site-teams need *resources*, but that the provision of these resources influences teaching and learning through the practice of site-based decision making rather than directly.

Equations seven and eight show the results relating to council member satisfaction with the site-based council and with the district's program. In the present

analysis, all four **support** factors emerge as having significant indirect and total effects on satisfaction with the site team, while two of the **support** factors, **training** (beta=.23) and **recognition** (beta=.16), also have significant direct effects on members' satisfaction with the site team. All three practice factors, **scope** (beta=.46), **decision-making practice** (beta=.12), and **trust** (beta=.24), have significant direct effects. In terms of the second satisfaction outcome, that is, satisfaction with the district's program, the direct effects from **support** factors included **administrative support** (beta=.39), **training** (beta=.22) and **recognition** (beta=.14). The practice variables relating to **scope** (beta=.28) also has a significant direct effect on satisfaction with the district's program, whereas neither of the other practice factors emerge as significant.

In sum, the path models indicated that both **support** factors and **practice** factors were important predictors of outcomes associated with site-based decision making. What is most striking, however, is that **support** factors had significant direct effects only with respect to specific outcomes, primarily the perceptions of effectiveness at promoting stakeholder influence. In terms of the other effectiveness outcomes, however, the impact of **support** factors was primarily through intermediate factors relating to **practice**.

Discussion

There have been few empirical analyses that include elements of site-based practice that relate to how site-teams actually operate, and even fewer empirical analyses across studies and samples. The theories (Brown, 1990; Bimber, 1993;

Fantini & Gittel, 1973) as well as the connecting logic (Murphy & Beck, 1995) surrounding school-based management have been sound. What has been missing, however, are descriptions of the social interactions among site-team members and the other school-wide participants in site-based decision making. Previous findings relating to investigations of these issues left the researchers still asking a number of important questions: (1) did the survey items actually measure the important aspects pertaining to the dimensions of **support** and **practice**? and, (2) was the single district sample worthy of generalizing the findings? For both questions, the researchers answered, no.

In this paper, we sought to address these limitations of the earlier analyses. First, based on survey feedback data, new survey items were created, piloted, and then added to the survey. This procedure led to the interpretation of new measurement scales for the **support** and **practice** factors. Second, a larger, more heterogeneous sample of fifty schools from fifteen school districts engaged in site-based decision making were used to retest the path model.

The new results as described above again confirmed the statistical significance of both **support** and **practice** factors, but in entirely new patterns. The four independent **support** factors had *direct* and *total* effects on the outcome relating to the perceived effectiveness of site-based decision making in promoting influence. However, when it came to effectiveness at improving decision-making and improving educational services, it was the **practice** factors which were statistically stronger as *direct* effects with the **support** factors emerging as statistically significant

only in terms of their *indirect* and *total* effects.

These results paint an extremely interesting picture, one that tends to lend support to the common-sense notion that different factors would emerge as significant for different types of outcomes associated with the implementation of site-based decision making. In the case of the perceived effectiveness of site-based decision making at enhancing stakeholder influence, the resources provided by the school system are most important; this might be seen as the direct effect of the devolution of decision making power. Put another way, the outcome stakeholders can hope to receive from the school system *directly* is enhanced influence in decision making.

The only other direct effect of any of the support factors was the relationship between recognition and improved decision-making. This makes some intuitive sense; **recognition** taps support from the local school community, who may be critical in promoting risk taking and successful implementation of site team decisions. **Training** resources, which include the adequacy of staff development and access to information, and time resources indirectly impacted the perceived effectiveness of site-based decision making in enhancing decision-making and improving educational services -- that is, their impact works through the intermediate practice factors of **scope** and **trust**.

None of the three **practice** factors had a statistically significant effect on influence, but as a group they were related to both the perceived effectiveness of site-based decision making in enhancing decision-making and in improving student

educational services outcomes. Specifically, practices related to **trust** had strong direct effects on enhancing decision-making and improving educational services whereas **decision-making practices** related significantly to improving educational services. These findings lend support to the notion that site team practices contribute to important outcomes of site-based decision making, even when controlling for resources.

The absence of a statistical relationship between the factor labeled *decision making practices* and the perceived effectiveness of site-based decision making in enhancing decision making outcomes warrants explanation. A careful examination of the component items of these scales shows that while a relationship might be expected, the absence of one makes equal sense. The scale representing decision making practice involves items relating to the implementation of site team decisions, e.g., whether the team takes responsibility for decisions, monitors how decisions are implemented, keeps those affected informed. The outcome measure deals with the perceived effectiveness of site-based decision making at promoting cooperation and trust among administrators and school staff, resolving problems, and enhancing the quality of decisions. The non-relationship between these suggests that to respondents, "doing things well" does not equate with achieving desired outcomes. That is, while stakeholders may agree that they do an excellent job *implementing* decisions (decision making practice), this does not automatically mean that their decisions yield positive outcomes or that they are making better quality decisions. The former scale has to do with doing things the right way, the latter with doing the right types of

things.

Taken as a whole, the results with respect to the **support** factors suggest that the devolution of power from traditional authorities to site-based teams which is intended with school-site management may result in enhanced influence. What site teams do with this influence, that is, whether it results in better decision making or improvements in teaching and learning, depends on what happens at the school site and, at least in part, how the site-based teams **practice** site-based decision making.

Conclusion

Site team decision making processes, including structures and composition, are generally treated like a "black box" in the literature. That is, what goes on at site council meetings, how site teams conduct their work, and how site team members perceive various aspects of the "rules of the game," tend to be ignored by researchers. This study sought to close this gap by extending the earlier design studies (Shedd, 1987; Shedd and Bacharach, 1991) to empirical measures more closely related to site-based decision making practices.

Beginning in 1996, Bauer tested the relationships among **support** and **practice** factors on **effectiveness outcomes** using a regression model. The statistically significant findings indicated the relationship between **practice** variables and **outcomes**. He found no statistical significance for any of the **support** factors. This finding created an unanswered question regarding the relationship between **support**, whether defined as administrative support or council capacities, and the outcomes of site-based decision making. Surely, site-teams need some measure of

support. At the same time, this finding established the priority of site-team practice variables, but this, too, left unanswered question as to the nature of practice.

In 1997, Bauer and Bogotch decided to retest the model on the *same* data set, which included twelve site-based teams in their third year of implementation of a site-based decision making pilot project in a single, urban, mid-western school district. Using path analysis permitted the researchers to evaluate the direct and indirect effects of predictors on effectiveness outcomes. The statistical results confirmed their hypotheses that **support** factors had indirect and total effects on the **effectiveness outcomes**, while the **practice** factors had direct effects.

Both the earlier path analysis study and the present one provide valid and reliable measures of site-based decision making structures and processes. Yet, their results are different. How should we interpret this? The results from the single, urban, mid-western district reflects the homogeneity of the district itself; the extremely high percentage of variance explained in these models is testimony to this (r-squared ranged in these models from .53 to .67). In contrast, in the present analysis the amount of variance explained as measured by r-square ranged from .23 to .56, with the r-square for the three outcomes associated with effectiveness ranging from .23 to .24. The measures in the present study appear to be more realistic and complete, linked to school district and school-site dynamics. Given this interpretation, the latter study is not a mere replication of the first; rather, the new and different results allow us to look across studies and across samples to better understand the complex dynamics of school-site decision making.

Finally, we also want to connect this work back to the literature on school-based management and decision making empowerment. There are no shortages of construct validation studies regarding aspects of school-based management, including Bacharach, Conley, Bamberger and Bauer (1990) and Taylor and Bogotch (1994) on decision-making; Short and Rhinehart (1992) and Bredeson (1994) on empowerment; and so on. The logic of action mapped out by Murphy and Beck (1995) is strong and provides an excellent overview of the constructs involved in site-based decision making and their presumed connections. But the study presented here went one step further; it empirically connected abstract constructs to variables measuring practice, relatively vague concepts to factors describing the decisions, structures, and actions of site teams.

Postscript

This study does not stand in isolation; few do. In preparing this paper, we struggled with the decision regarding how to present our findings in the context of our previous work. The present analysis might be more parsimoniously presented with only passing mention to the work upon which it was based. By presenting a good deal of our prior work in some detail, we take something of a risk associated with somehow diminishing our previous work or contradicting our previous thinking. Yet, the pragmatic and methodological issues we faced along the way, and how our thinking and approach has developed, may be interesting to the reader, thus we invited you here to share something of the journey we have been on.

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Notes

[1] A total of seventeen districts were initially invited to participate in the study, and 57 teams from these districts responded. Two of the districts were intermediate service agencies rather than traditional school districts, and seven of the responding teams were either from these districts or were district-level decision making teams. These were omitted from the present analysis.

[2] According to the state classification scheme, a district is suburban if it is located within a Standard Metropolitan Statistical Area. To most audiences, at minimum four of the districts would appear rural, two urban, and the remaining suburban.

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