Collaborative Problem Solving Effectively Implemented, But Not Sustained: A Case for Aligning the Sun, the Moon, and the Stars

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ABSTRACT: This 2-year qualitative case study examined factors influencing implementation and sustainability of collaborative problem-solving programs. One selected elementary school served as the focus site. Using a participant—observer field-based approach, data were collected via observations, interviews, mute evidence, and field notes. During Year 1 of the study, implementation integrity was high, participants' perceptions of the process were positive, professional collaboration was enhanced, students' academic and behavioral concerns were effectively addressed, and special education rates were reduced. However, successful implementation was not sustained during Year 2 following a dramatic reduction in support from the school district. Analysis revealed district-level decisions exert a significant and cascading effect on procedures, perceptions, and ultimately, student outcomes. Within that context, implications for practice are offered.

The concept of teams of teachers and other school professionals working together to address student concerns was introduced over 30 years ago. Since then, various names have been used to describe these teams such as (a) mainstream assistance (D. Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990); (b) instructional consultation (Rosenfield & Gravois, 1996); (c) instructional support (Kovaleski, Gickling, Morrow, & Swank, 1999); and (d) prereferral intervention (Graden, Casey, & Christenson, 1985). Although there are differences among these models (e.g., team composition, meeting structure, and the process of implementing interventions), all share a common, preventive goal of “eliminating inappropriate referrals, while increasing the legitimacy of those that are initiated and reducing future student problems by strengthening the teacher's capacity to intervene effectively with a greater range of children” (D. Fuchs, Mock, Morgan, & Young, 2003, p. 160). In this article the generic term collaborative problem solving (CPS) describes these
models and practices because it de-emphasizes the common, though inaccurate, assumption that prereferral intervention is part of an inevitable path toward special education (Bahr & Kovaleski, 2006).

The use of CPS has shown to have many benefits. These include (a) a decrease in the number of students who are screened, tested, and found eligible to receive special education services (Burns & Symington, 2002; McDougal, Clonan, & Martens, 2000; McNamara & Hollinger, 2003); (b) a reduction in disproportionality (Gravois & Rosenfield, 2006; Marston, Muyskens, Lau, & Canter, 2003); and (c) academic and behavioral improvements among referred students (D. Fuchs, Fuchs, Harris, & Roberts, 1996; Kovaleski et al., 1999; Telzrow, McNamara, & Hollinger, 2000). Benefits to teachers include enhanced professional support and collaboration (Bahr, Whitten, Dieker, Kocarek, & Manson, 1999; Ormsbee & Haring, 2000; Welch, Brownell, & Sheridan, 1999) as well as an expanded repertoire of skills related to instructional strategies, behavior management, and assessment (Batsche & Knoff, 1995; Ingalls & Hammond, 1996).

However, research does not document unequivocal success. Specifically, referral concerns are not always successfully addressed (Knotek, 2003; Rock & Zigmond, 2001); teachers and administrators express varied levels of support (Athanasiou, Geil, Hazel, & Copeland, 2002; Slonski-Fowler & Truscott, 2004); and it is difficult to sustain successful implementation (D. Fuchs et al., 1996; Rubinson, 2002). These divergent findings reflect a growing understanding that CPS is influenced by complex interactions among multiple factors. Thus, rather than looking to generically classify CPS as effective or ineffective, it is more useful to examine factors shown to influence implementation and sustainability (e.g., Rock & Zigmond).

SUCCESSFULLY IMPLEMENTING CPS

Multiple factors are shown to influence whether CPS is effectively implemented and, in turn, facilitate appropriate outcomes among referred students. First, when participants believe the overarching goal of CPS is to prevent inappropriate referrals for special education, the team is more likely to engage in meaningful, intervention-oriented problem solving (Bahr & Kovaleski, 2006; McNamara & Hollinger, 2003). In contrast, when members view CPS as just one of many required steps that must be completed before special education eligibility screening occurs, team efforts and interactions focus on validating and confirming the presence of a disability (Knotek, 2003). Second, when participants attribute referral concerns primarily to student internal factors such as skill deficits, psychological conditions, or difficult circumstances at home, team recommendations are more likely to focus on actions that students and families need to take (e.g., private therapy and medication; Athanasiou et al., 2002; Knotek; Rubinson, 2002). In contrast, when the locus of the problem is attributed to external factors such as those related to the curriculum, instructional strategies, or the classroom environment, team recommendations tend to reflect interventions that school personnel will implement (e.g., supplemental instruction and behavioral support). Third, general and special education teachers' perceptions about their role in CPS influence their level of engagement (Rubinson; Slonski-Fowler & Truscott, 2004). Specifically, they are more likely to actively participate when they believe their concerns are taken seriously, their input is valued, and they can meaningfully contribute to each stage of the problem-solving process. Fourth, beliefs and actions of the school principal influence implementation. Success is facilitated when the principal is actively involved in the process (Kovaleski et al., 1999); offers positive feedback and recognition to participants (Kruger, Struzziero, Watts, & Vacca, 1995); and provides necessary resource support (e.g., reallocating staff time and resources, providing release time for meetings, and securing clerical support for record keeping; McDougal et al., 2000). Fifth, student outcomes are more positive when the CPS model is comprehensive, well defined, and implemented with integrity (Kovaleski et al.; McNamara & Hollinger; Telzrow et al., 2000). This includes using multiple sources of data to accurately identify and understand referral concerns and writing intervention plans that identify appropriate performance goals, research-
based strategies, and comprehensive evaluation procedures (Flugum & Reschly, 1994; Marston et al., 2003). Finally, student outcomes are dependent on whether recommended interventions are implemented with integrity (Noell et al., 2005). Implementation integrity is increased when teachers possess adequate knowledge and skills, when assessment data is used to monitor student progress, and when necessary support is provided to teachers (D. Fuchs et al., 1990; McDougal et al.; Rosenfield & Gravois, 1996).

SUCCESSFULLY SUSTAINING CPS

In contrast to successful implementation, there is less research focused on describing the factors that influence CPS sustainability. Hammond and Ingalls (1999) reported that 8 out of 10 multidisciplinary CPS teams remained in operation over an 8-year period. Feedback from team members suggested sustainability was achieved through (a) systematic training designed to match each team's unique needs (e.g., develop a vision and goals for team operations; identify team strengths, barriers, and goals; and identify a team leader and roles/responsibilities for each team member); (b) participants' appreciation for the skills and contributions of other team members; (c) membership rotation among general education teachers; and (d) a tracking system used to assure team efforts are recognized, utilized, and implemented across time and settings.

McDougal et al. (2000) reported that CPS teams at four elementary schools achieved high levels of process integrity, favorable acceptability ratings from teachers and administrators, and meaningful reductions in special education referral rates over a 2-year period. Success was attributed to four factors: (a) district administrators demonstrated consistent involvement with and support for CPS (i.e., regular updates to the board of education, routine planning meetings with the Director of Special Education, and budgetary allocations to support implementation); (b) building principals demonstrated consistent involvement with and support for CPS teams (i.e., reallocation of staff time and resources and scheduling space and time for meeting); (c) participants were provided with effective and highly-relevant CPS training opportunities; and (d) the CPS model was revised formatively in response to participants' concerns.

Rubinson (2002) examined 12 high school CPS teams from their establishment through 2½ years of implementation and found considerable variability with regard to the evolution of functions and outcomes. Six teams engaged in direct interventions that increased services to referred students (e.g., counseling, remedial teaching, and mentoring); two teams focused their efforts on creating systematic interventions (e.g., attending Saturday school programs and implementing block schedules); and four teams evidenced little progress or success. Factors that inhibited efficacy include (a) resistance to use instructional strategies that are individualized or varied because they conflict with teachers' desires to maintain uniform, high standards associated with credit-driven instruction; (b) overrepresentation of support staff members on teams due to difficulty enlisting participation among teachers; (c) team members' beliefs that teacher assistance is integrally involved with administrative supervision; (d) attributing students' difficulties to within-child factors such as family concerns, lack of motivation and skill deficiencies, and ignoring the role of classroom and instructional variables; (e) mistrustful relationships among staff members; (f) limited knowledge about classroom instruction among support staff members; and (g) stability in the school environment and team membership.

Finally, although D. Fuchs et al. (1996) did not intend to investigate factors associated with sustaining CPS, their project with the Nashville Public School District highlighted the significant impact of district policies and actions. Over a multiyear period, university-based staff provided extensive CPS training for over 150 educators in 34 elementary schools, supported implementation of CPS teams, and documented the consistently positive impact CPS teams had on referred students. However, almost immediately after the university partnership ended, all CPS teams ceased operation. Fuchs et al. concluded that this "disappearing act" (p. 264) resulted from numerous systemic factors including high pupil-teacher ratios; special education funding formulas that discouraged inclusion; lack of support from dis-
strict administrators and school principals; and the unavailability of special educators, school psychologists, and guidance counselors for consultation.

**PURPOSE OF THE STUDY**

Although many studies explore GPS implementation, and to a lesser degree sustainability, significant concerns are raised about the overall quality of research in these areas and critical gaps in the extant literature are identified (for detailed reviews see Athanasious et al., 2002; Bahr et al., 2006; Burns & Symington, 2002; D. Fuchs et al., 2003; Knotek, 2003; Kovaleski & Glew, 2006; Telzrow et al., 2000; Welch et al., 1999). Previous GPS research relied heavily on surveys and post hoc analysis of district supplied data. These methods have the inherent limitation of not revealing actual school practices and not allowing for the investigation of factors such as interactions among team members. Thus, much remains to be learned about the true impact of, and relationships among, system and process variables that enhance GPS implementation and outcomes over time.

Previous GPS research is also predominated with data reflecting the perceptions and experiences of general education teachers and district-level administrators. Thus, much remains to be learned about how school administrators and individuals representing various educational specialties perceive, impact, and participate in CPS. This is particularly salient given that principals and other key individuals have been shown to significantly influence the sustainability of reform initiatives (e.g., L. S. Fuchs & Fuchs, 2001; Purcell, Horn, & Palmer, 2007; Sindelar, Shearer, Yendol-Hoppey, & Liebert, 2006).

This qualitative case study was conceived and executed in response to those concerns. It involved an extensive field engagement over a 2-year period; observations of CPS meetings; and interviews with general education teachers, special education teachers, the principal, and other school professionals. This allowed for the development of a model describing effective CPS implementation; an understanding of what factors influenced implementation and sustainability; and insight about the unique meaning participation had for teachers, the principal, and other school professionals.

Three research questions serve to guide and focus this study:

1. What does successful CPS implementation look like within a school?
2. What factors contribute to successful CPS implementation and sustainability?
3. What are the nature, meaning, and impact of CPS participation for teachers, the principal, and other school professionals involved with implementation?

The findings from this investigation support earlier research and offer new understandings relevant for practice and policy.

**METHOD**

A qualitative research design was selected for this study because it is systematic, yet is a flexible way to explore "naturally occurring, ordinary events in natural settings, so that we have a strong handle on what 'real life' is like" (Miles & Huberman, 1994, p. 10). Within that paradigm, case studies are particularly well suited to investigate the complexity associated with implementing and sustaining educational practices (including CPS) because multiple factors can be examined (Lincoln & Guba, 1985; Miles & Huberman). This methodology also allows for responsive design modifications "if we come across interesting circumstances or if theories that arise in the initial round of the investigation merit taking a sidetrack from the original plan" (Brantlinger, Jimenez, Klinger, Pugach, & Richardson, 2005, p. 198). One overarching goal of this study was to provide a comprehensive description of the "particularity and ordinariness" related to CPS implementation at a site of interest (Stake, 2005, p. 445). A second goal was to use the school’s experiences to elucidate recommendations to inform future policy and practice.

**SETTING**

**Pleasant Valley Elementary School (PVES).** PVES was selected for this case study using theoretical sampling (Eisenhardt, 2002); pseudonyms
are used for all people, places, and programs referenced in this article. District and school personnel anticipated PVES to be an exemplary implementation site based on four factors: (a) the principal's initial willingness to implement the district's new CPS model, (b) the enthusiasm and commitment expressed by key school professionals to participate in CPS, (c) the effective use of inclusive practices at the school, and (d) the perceived skills among general and special education teachers at the school.

PVES is part of a large school district located just outside a major metropolitan city. It is a warm and welcoming school that, by nature of its geographic location, serves a more rural community than other schools within the district. When this study began, PVES had approximately 470 students enrolled in grades kindergarten through fifth grade where the demographics of students are 85% Caucasian, 7% Hispanic, 6% African American, and 2% Asian. Seventeen percent of the students are eligible for free or reduced meals, and 11% of students receive special education services. According to the principal, the majority of students are from blue collar or working class families with many children being raised on farms where their parents are laborers.

PVES has one principal, 20 general education teachers, three special education teachers, and several other nonteaching professionals on staff. The average class size is 26 students in each first and second grade and 25 students in each third, fourth, and fifth grade. Special education services are delivered using what the district calls a home–school inclusion model; the majority of academic and behavioral support for students with individualized education programs (IEPs) is provided by special education teachers in general education classrooms using a variety of co-teaching strategies.

Problem Solving Together (PST). PVES is one of six schools in the district to voluntarily pilot a CPS model called PST. PST was developed as an integral component of a partnership agreement with the Department of Education's Office of Civil Rights to ensure that "disproportionality does not result from disparate treatment of the affected students by the district's special education identification, evaluation, and placement procedures or practices" (District, 2002, p. 8). PST, designed by district personnel, is based on a synthesis of ideas and elements in existing CPS models (e.g., Batsche & Knoff, 1995; McDougal et al., 2000; Rosenfield & Gravois, 1996). It is one of several initiatives aimed at facilitating the district's ability to effectively utilize response-to-intervention approaches.

PST, founded on seven assumptions, is designed to improve the multidisciplinary referral process used by the district for the previous 20 years (District, 2002).

1. All students can learn, and when they are not learning, it is the responsibility of educators to analyze what might inhibit students' academic achievement and therefore target intervention(s) appropriately.

2. The process of learning is viewed as a unique interaction between the student and the instructional environment. Consequently, problem solving should analyze and address factors such as classroom features; instructional methods; curricular demands; individual student and teacher characteristics; home, school, and community issues; social skills; and peer-to-peer and peer-to-adult interactions.

3. Because many variables influence learning, assessment needs to be comprehensive and target multiple factors involving the student, teacher, classroom, home, and community.

4. Participation in PST should lead to implementation of situation-specific interventions that improve student achievement.

5. Services provided with PST are need-based rather than eligibility-driven and should be delivered primarily in the general education setting.

6. Assessments should be functionally linked to intervention rather than global in nature.

7. Participation in PST should enhance teachers' abilities to understand why a student is experiencing difficulty and to identify, implement, and evaluate appropriate interventions.

PST used grade-based teams of general education teachers that met at least two times each month to discuss new referrals and monitor the
progress of ongoing cases (District, 2002). Each grade-level PST team had a designated coach responsible for facilitating the problem-solving steps, ensuring that proper paperwork was completed, and evaluating the process. Each school also had a building-level PST team comprised of multidisciplinary personnel including the counselor, nurse, school psychologist, curriculum specialists, and administrators. When grade-level PST teams were unable to successfully address the concerns raised about a student, they referred the case to the building-level PST team for additional problem solving and potentially for special education eligibility consideration. However, the latter was only permissible “in severe cases when an educational disability is suspected and the problems are consistently resistant to targeted and comprehensive general education interventions that are implemented as designed” (p. 24).

The problem-solving model embedded in PST involved four steps: (a) problem identification, (b) problem analysis, (c) intervention planning and implementation, and (d) intervention plan monitoring and evaluation (District, 2002). During problem identification, the team clarified the referral concerns by collecting information from permanent records, teachers, parents, or independent observers. The goal was to generate current and desired behaviors or academic performance levels. During problem analysis, the team investigated whether the discrepancy between desired and actual performance was the result of a skill deficit or a performance deficit. This was done by examining the duration, intensity, and frequency of the problem as well as factors related to curriculum, instructional strategies, class environment, and home situations. Data were gathered using a variety of techniques including curriculum-based assessment, behavioral rating scales, classroom observations, record reviews, and interviews. During intervention planning and implementation, the team identified strategies to address the referral concerns. Strategies were empirically proven, conducive to the regular classroom routine, feasible to implement, and easy to monitor. During this stage, the team also documented who was responsible for each aspect of the plan, the criteria for success, and the evaluation methods. During the final step, intervention plan monitoring and evaluation, the team documented student progress in the targeted area(s) and planned for maintenance and generalization. If a student did not respond positively to the recommended interventions, the team revisited the problem analysis stage.

**Participants**

This study documented schoolwide PST implementation and sustainability at PVES via extensive field engagement (described in the next section). However, intimate analysis was achieved by (a) focusing on a core group of eight school professionals integrally involved with PST teams at all grade levels and (b) purposefully selecting the second grade Year 2 PST team as an embedded case (Stake, 2005; see Table 1). This team was chosen because the principal at PVES predicted it to be the most successful based on the teachers’ knowledge, skills, experience, and philosophical endorsement of the model. The second grade PST team consisted of three Caucasian, female general education teachers, each with approximately 20 years of teaching experience. A brief description of each teacher follows; the information reflects a combination of the researcher's observations and descriptions offered by staff members at PVES.

Rachel Cook is the second grade team leader for Year 2. She has an assertive personality and never hesitates to express her opinion. She is regarded highly by her colleagues at PVES because of her ability to maintain rigorous academic standards as well as to adapt instruction to meet the needs of individual students. Sylvia Pollack is a well-respected, mild-mannered woman who demonstrates consistent dedication to her work and genuine care towards all her students. She displays more confidence in the classroom than she does when interacting with her colleagues at PVES. For example, she frequently hesitated before answering a question and often predicated her thoughts with caveats such as, “I’m not quite sure, but I think . . .” or “I’m certainly not an expert, so you might want to also check with someone else.” Martha White is one of the most beloved staff members at PVES. She is frequently described as a nurturing and patient teacher who emphasizes developmentally appropriate tasks and emotional growth. Many students are specifically
TABLE 1

Study Participants

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Position</th>
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<tbody>
<tr>
<td>Meredith Adams</td>
<td>Counselor</td>
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<tr>
<td>Eric Baldwin</td>
<td>Special education teacher</td>
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<tr>
<td>Rachel Cook</td>
<td>Second grade team leader/PST team member</td>
</tr>
<tr>
<td>Sally Cowell</td>
<td>School psychologist</td>
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<tr>
<td>Dominique D'Amico</td>
<td>Speech and language specialist</td>
</tr>
<tr>
<td>Jasmine Dillon</td>
<td>Staff development specialist</td>
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<tr>
<td>Robyn Kelly</td>
<td>Principal</td>
</tr>
<tr>
<td>Linda Marker</td>
<td>Special education teacher</td>
</tr>
<tr>
<td>Steve Palmer</td>
<td>District PST supervisor</td>
</tr>
<tr>
<td>Sylvia Pollock</td>
<td>Second grade teacher/PST team member</td>
</tr>
<tr>
<td>Barbara Richardson</td>
<td>English as a second language teacher</td>
</tr>
<tr>
<td>Martha White</td>
<td>Second grade teacher/PST team member</td>
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</tbody>
</table>

Note. PST = Problem Solving Together.

assigned to her classroom when they need extra kindness and positive feedback.

DATA COLLECTION

Data were collected using a participant–observer field-based approach (Bogdan & Biklen, 1998). Observations, interviews, mute evidence, and field notes form the basis for this research.

Observations. Ongoing, informal observations were conducted throughout this study via an extensive field engagement at PVES (i.e., the author spent 5 hr per week at the school over a 2-year period); the interviews facilitated the researcher's authentic and intimate understanding of procedures, perceptions, and outcomes associated with PST. Informal observations occurred in classrooms and other settings (e.g., lunch and recess); during PST meetings held by teams other than second grade; and during all other PST related meetings held at the school (e.g., among grade-level coaches, with district personnel, and at schoolwide faculty meetings). Informal discussions and interactions about PST were also frequently observed and documented.

Formal observations were used to document participants' behaviors and interactions during CPS meetings. Specifically, each Year 2 second grade PST meeting was observed and audiotaped. Each tape was transcribed verbatim and then checked for accuracy by a retired educator who was blind to the purpose of the study (Bogdan & Biklen, 1998; Silverman, 2003). Following each meeting, participants completed a written response probe designed to elicit thoughts and feelings that might not have been spontaneously shared during the team's discussions (Miles & Huberman, 1994). This probe included three questions:

1. What are your thoughts about how well this PST meeting went?
2. Did you feel this meeting was an effective use of your time?
3. How do you feel about the outcomes/strategies/follow-up recommended as a result of this meeting?

As described in the findings section, the second grade PST team was expected to meet approximately 15 times during Year 2 based on implementation during Year 1 of the study. However, they ultimately met only 3 times.

Interviews. Interview data were collected to document participants' experiences with PST and to elicit their perceptions of the process. Two individual interviews were conducted with each of the three second grade teachers as well as with each of the eight other school professionals who were integrally involved with PST teams at all grade levels. The first interviews occurred at the beginning of Year 2 and focused on participants' perceptions of Year 1 as well as their expectations for Year 2. The second interviews occurred at the end of Year 2 and focused on summative reflections based on 2 years of implementation experience. To broaden the scope and range of the information obtained, an interview was also conducted with the district's PST supervisor, Steve Palmer, during the fall of Year 2 (Lincoln & Guba, 1985).

Interview conversations were structured using flexible protocols that consisted of broad, open-ended questions focusing on participants' perceptions of (a) PST participation, (b) outcomes associated with PST, (c) benefits and challenges of PST implementation and sustainability, and (d) suggestions to improve PST (Denizen &
Lincoln, 2005; Fontana & Frey, 2005; Interview protocols are available from the author upon request.) Each interview lasted approximately 1 hr and was audiotaped, transcribed verbatim, and checked for accuracy by the same retired educator who reviewed the observation transcripts (Bogdan & Biklen, 1998; Silverman, 2003).

**Mute Evidence.** Mute evidence was collected to document PST implementation procedures, participants' perceptions of PST, and outcomes associated with PST through sources not directly influenced by the researcher (Hodder, 2003). Specific data sources include written text materials such as student referral forms, student intervention plans, PST meeting summary logs, e-mail correspondence, and mailings sent to parents. Document summary forms recorded the context and significance of each item (Miles & Huberman, 1994). In addition, school records of second grade students were reviewed for pertinent data (e.g., demographics, report card grades and comments, yearly reading achievement levels, standardized test scores, and narrative information related to prior and current educational intervention services). A comprehensive educational history including these data and PST-related information was compiled for each of the 17 second graders referred to the PST team during Year 2.

**Field Notes.** Several strategies were used during this study to compile comprehensive field notes. Contact summary sheets (Miles & Huberman, 1994); jottings; and head notes (Emerson, Fretz, & Shaw, 1995) documented interviews and observations. Asides, commentaries, and memos facilitated reflection, posed responsive questions for inquiry, and promoted ongoing interpretation of the growing data set (Emerson et al.; Miles & Huberman). By the end of the study, approximately 150 typed pages of field notes were compiled.

**DATA ANALYSIS AND INTERPRETATION**

Modified analytic induction (Bogdan & Biklen, 1998; Miles & Huberman, 1994) and content analysis (Patton, 2002) were used to analyze and interpret the data. Together, these approaches allowed for an ongoing, flexible, and recursive process that involved searching for patterns, integrating and synthesizing emerging themes, seeking additional data to support or challenge the findings, and eventually distilling meaning. As data were collected during the fall of Year 1, open coding identified 19 preliminary codes and categories (Miles & Huberman; Patton). As additional data were gathered through May of Year 2, inductive analysis continued and the initial codes and categories were iteratively refined to reflect emerging patterns of convergence and divergence. Those with minimal data were collapsed or eliminated and new ones were created when justified. For example, Benefits was an initial code used to designate positive outcomes noted for teachers and students. However, data ultimately supported the creation of eight subcodes under the Benefits category: (a) actual benefits to students Year 1, (b) perceived benefits to students Year 1, (c) actual benefits to teachers Year 1, (d) perceived benefits to teachers Year 1, (e) actual benefits to students Year 2, (f) perceived benefits to students Year 2, (g) actual benefits to teachers Year 2, and (h) perceived benefits to teachers Year 2. Every time a code was developed, it was operationalized with a clear definition that delineated what data should and should not be included (Miles & Huberman). As codes were revised, all previously coded data were reviewed and recoded accordingly, and all coded data were reviewed and checked for accuracy by the retired educator who verified the transcripts. (A list of initial and final data codes is available from the author upon request.)

Computers and coding software (i.e., QSR NVivo) facilitated data analysis and interpretation. This technology, however, was used in conjunction with manual techniques to ensure that the richness and context of the data (e.g., connotations suggested through voice intonation or bold writing) was not minimized or trivialized (Hesse-Biber, 2004). Throughout this process, four data display formats were used (Miles & Huberman, 1994):

1. A time-ordered matrix helped summarize important events that occurred at PVES during Year 1 and Year 2.
2. A role-ordered matrix that featured the three members of the second grade team and the eight other school professionals featured in this study to help identify salient features of
each participant noted by the researcher and offered by other staff members at PVES.

3. A thematic conceptual matrix to help distill the meaning and importance of the data.

4. A causal network to help highlight relationships among the factors that influenced PST implementation and sustainability.

Collectively, these formats helped structure the discussion of the findings from this study.

**Trustworthiness and Authenticity**

Several techniques enhanced the trustworthiness and authenticity of this study. First, data were triangulated by type, source, and method (Lincoln & Guba, 2002; Miles & Huberman, 1994). Specifically, data were gathered over a 2-year period in a multitude of formal and informal settings and from participants with diverse roles at PVES. Data reflect PVES staff members' perceptions of PST as well as actual behavior during PST meetings. Deliberate steps were taken to avoid an overrepresentation of articulate, high-status, accessible, or conforming participants (e.g., through the use of written response probes and ongoing, extensive field engagement). Second, the use of guiding research questions and purposeful sampling ensured data collection, interpretation, and analysis were focused, appropriate, and relevant (Denzin, 2004; Lincoln & Guba). Third, the use of field notes in conjunction with audiotapes yielded a contextually-situated data set consisting of thick, rich descriptions and direct quotations infused throughout the presentation of this study's findings (Denzin; Fontana & Frey, 2005; Silverman, 2003). Fourth, participants were given multiple opportunities to offer feedback on whether interpretations were reasonable and valid (Brantlinger et al., 2005). Informal member checks occurred regularly throughout the study within the natural context of discussing PST at PVES. A final member check was conducted with the study's primary participants at the end of Year 2 and suggested general agreement with the conclusions that were drawn. Finally, a guiding principle of this study was the persistent search for negative evidence, outliers, and unexpected findings (Miles & Huberman, p. 271). As data began to suggest a theme or point towards a conclusion, data contradicting that finding were actively sought. For example, the staff at PVES directly attributed the divergent implementation experiences in Year 1 and Year 2 to the reduction in district-level support. To pursue this theme further, an interview was scheduled with the district PST supervisor and implementation experiences at other schools were explored.

**Findings**

In this section, a summary of the findings related to PST implementation at PVES is offered. First, an overview of implementation during Year 1 is presented. Then, two critical events which occurred during the summer between Year 1 and Year 2 are discussed. Finally, an overview of implementation during Year 2 is offered.

**PST at PVES: Year 1**

**PST Team Membership.** During Year 1, there were five PST teams at PVES: a combined kindergarten/first grade team, second grade team, third grade team, fourth grade team, and fifth grade team. Each team consisted of all the general education teachers at that level (i.e., four to six teachers per grade) and a coach who was assigned by Mrs. Kelly. The building's three special education teachers, the counselor, and the speech and language specialist served as coaches. In addition, Mrs. Kelly, Mrs. Dillon, and Dr. Cowell attended nearly every meeting, and teams frequently invited others who could offer useful information about a referred student (e.g., a special education teacher, the nurse, or the reading specialist). Consequently, PST meetings held during Year 1 typically consisted of at least eight participants.

**PST Meeting Schedules and Structure.** Each grade-level PST team met regularly for 2 hr, twice a month, at a predetermined time during the instructional school day. Thus, grade-level PST teams met between 15 and 20 times during Year 1. Maintaining this schedule was possible because Mrs. Kelly used discretionary funding from the district to pay for substitutes who covered teachers' classes while they attended PST meetings.

Teachers initiated problem solving for a student by completing the district's referral form and submitting it to their team coach. The coaches...
used the referral forms, along with their personal knowledge of ongoing cases, to develop and distribute a list of students to be discussed at each meeting. Coaches also typically assumed responsibility for bringing students' cumulative and confidential folders to the meetings.

PST meetings began with participants deciding who would assume each of the four meeting roles: (a) facilitator, (b) note taker, (c) time keeper, and (d) process observer. Next, the team designated how much time was allocated for discussion of each student on the agenda; new referrals were typically assigned 30 min and follow-up cases were given 15 min. Throughout the meeting, the facilitator guided the team's discussion about each student and the note taker completed the appropriate documentation. To conclude the meeting, the process observer offered his or her reflection about the meeting and solicited suggestions for future improvement.

The Problem-Solving Process. During Year 1, discussions about referred students were structured around the four problem-solving steps. Step one, problem identification, involved the referring teacher reviewing the information recorded on the referral form. The facilitator then moved the team into step two, problem analysis, and used a reference sheet of essential questions to guide the discussion about what factors might contribute, or cause, the student's difficulty. Based on those insights, the team then engaged in step three, intervention planning, and developed an intervention plan that identified student goals, strategies to be implemented, responsible staff members, and progress review dates. At subsequent meetings, the team focused on step four, plan monitoring and evaluation, until the concerns were adequately addressed or the case was referred to the building-level PST team.

Mrs. Dillon explained how PST differed significantly from the model that had previously been used in the district:

Having experienced the [previous model] for quite some time, I saw [PST] as such a growth process. It was so much better for many reasons. For one, one of the biggest reasons was it no longer told the teacher, "Oh, we understand you have a problem child in your classroom, this is what we're going to do to fix it." Now it's, "Oh, tell us what you're thinking and we can tell you have thought about this, this is what we're thinking, and together as a team we're going to work on strategies to support this child."

It's no longer the teacher saying, "OK. I've hit this brick wall now it's your problem, fix it. Take it out of my room, fix it in my room, whatever you do, fix it." Now it's much more of a process the way it should be. . . . It's really a team of professional educators putting their thoughts together and looking at the child as a whole, together.

Similarly, Mrs. Cook reflected:

[PST] meetings were a time to just sit down and bring up kids you had concerns with. And so for that reason, it was a really good process because you were able to say, "Okay, I have this child who's reading on this level, you know, she hasn't made any movement or minimal amount of progress. I have concerns. These are the things I've tried; these are the strategies I've tried." And so we would all get together and brainstorm, you know, just good practices. Things that would work. "Try this. Try implementing this. And call home and make a home connection and maybe see if they're supportive at home. This is what they can do at home to reinforce what we're doing in school." So it was a good way to get together and just brainstorm solutions to some problems.

PST Documentation. During Year 1, the PST teams consistently used the documentation forms developed by the district. These included a comprehensive referral form and additional forms that corresponded with each step of the problem-solving process. They also consistently used a form Mrs. Kelly developed to summarize the case discussions that took place during each PST meeting. The documentation that was maintained during Year 1 was thorough and accurate. The following example is a typical summary statement reflecting the discussion of a first grade student:

Concerns: Can print 16 of 23 PST letters, 16/23 lower case letters. Level 1 reading, 10/16 Concepts of Print, cannot initiate a sentence, difficulty with following directions, sequencing numbers, and spatial relations. Strengths: Draws pictures, can dictate a sentence, cooperative, listens attentively to stories, some support at home, works on
alphabet at home. Action Items: Gather baseline data about current letters and numbers she knows—goal obtain 3 new letters and 2 new numbers by next mtg, contact mom—discuss homework and how to focus on learning letters, modify homework to encourage her to practice target numbers and letters. [For each action item, the person responsible was also indicated].

All of the general education teachers indicated that the PST documentation used during Year 1 was beneficial. Specifically, it guided them through recording and summarizing initial referral concerns, clarified the specifics of an intervention plan (e.g., who would implement certain strategies, when to review the plan, and how to evaluate a student's progress), and helped avoid the need to reinvent the wheel every year. There were at least four teachers who, along with articulating the benefits of documentation, expressed concerns about the required documentation being slightly time consuming and labor intensive. However, this perspective was not pervasive and it did not prevent those with concerns from completing the required forms.

All of the general education teachers indicated that the PST documentation used during Year 1 was beneficial.

The special education teachers, Mrs. Kelly, and Dr. Cowell also saw a direct correlation between use of PST forms and implementation fidelity with the problem-solving steps; the forms helped guide the discussion and prompted consideration of salient questions. In addition, the documentation of student progress was viewed as beneficial if a student was eventually screened for special education eligibility because it provided the building-level PST team with information about response to intervention and insights related to additional appropriate assessments.

Data. During Year 1, teachers used multiple sources of data in strategic ways throughout the problem-solving process. This began when they initiated a referral because completing the district's form required them to compile and record information reflecting the student's current performance levels as well as the educational, medical, behavioral, and familial history. When teachers presented a new case to the PST team, they consistently brought work samples to highlight a student's abilities as well as the perceived areas of need. After writing an intervention plan, teachers assumed primary responsibility for collecting and graphing data to document student progress. Mrs. White explained:

You became more structured in the types of things you were looking for. With [PST], you knew you were going back to the meeting, so you just made sure you were on top of it all the time. Not that you weren't when you were trying your own little methods, it was just that you knew you had to collect this data and you were responsible for that.

Many teachers indicated this increased level of involvement with data collection was beneficial because they learned new assessment techniques that, in turn, helped them plan instruction.

Referrals and Interventions. During Year 1, approximately 100 student referrals were made to PST teams at PVES. The majority of referrals were made for academic concerns (typically with reading and/or math), but students were also referred because of behavioral difficulties in the classroom. Although referrals represented all grade levels, the kindergarten/first grade team had the most referrals. The special education teachers, the principal, and the school psychologist attributed this to the fact that teachers in the early grades are especially cognizant of the need to intervene as soon as a student evidenced difficulty with the acquisition of skills related to phonological awareness, reading fluency, or reading comprehension.

In nearly every case, the PST discussion resulted in an intervention being implemented by a general education teacher. Some of the most common academic interventions were strategies designed to improve automaticity with high-frequency words, phonological awareness, reading comprehension, reading fluency, and understanding mathematical concepts. Teachers also developed behavioral contracts; initiated communication logs with parents; used behavior management techniques (e.g., the think chair); and
implemented a variety of accommodations and modifications (e.g., repeating and rephrasing directions, adjusting the number of repetitions used to reinforce a concept, and using peer tutors). Reflecting on the increased use of interventions, Mrs. Pollock explained:

We would give recommendations to go over directions a second time with the child, or a third, or a fourth. Or, making sure we were working one to one with a certain area the child may be having difficulty in terms of breaking a job down so it is not so overwhelming. Or, you know, just getting ideas for different games for the child to reinforce something. . . . With a child who was having trouble learning the word wall words, you know, someone brought up the idea of the sandwich technique. And I hadn't heard that before and that really helped. And you can use it for other children, not just that one child.

Mrs. White added:

We came back to our classrooms to try the information we collected from that meeting from all the teachers and used it by keeping data whether it be tally marks or writing notes. And I thought it was effective talking with other teachers who may have handled other situations very similar to this. And even just refreshing our memory because sometimes when you're in the middle of a situation, you don't remember everything and you get refreshed, and you come in and you have a new look.

Many of the PST-recommended interventions implemented by classroom teachers successfully addressed referral concerns. However, there were also cases where the intensity and/or severity of a student's need suggested that interventions by the general education teacher alone were not adequate or feasible. For those students, additional support and service from others in the building (termed early intervention support) was deemed necessary and was consistently provided. Early intervention support was typically recommended in conjunction with other classroom-based strategies and was most commonly provided via a small group format. During Year 1, small groups addressed difficulties in math, reading, and written language for students at all grade levels. However, this was used most commonly for implementing a structured phonological awareness program (Wilson Reading) with emergent readers; 16 groups were created and systematically implemented. For some students, early intervention support was provided using co-teaching strategies, and early intervention support was predominantly provided by the three special education teachers. However, there were also some instances where the two special education instructional assistants or the reading specialist led instruction.

The staff at PVES unanimously and enthusiastically believed that early intervention support was beneficial for referred students. For example, Mrs. D'Amico explained:

It was significant support, daily support, especially in the early grades, which was amazing. I mean it was really great for those kids. Kids would not have been where they were when they moved into the next grade. They would have been much further behind.

Dr. Cowell concurred with this assessment and indicated that early intervention support translated into students making "identifiable and concrete progress" in ways she never experienced during her previous 25 years with the district.

Student Outcomes. During Year 1, PST-recommended interventions were credited with producing laudable achievement gains among nearly all referred students. This, in turn, led to a significant decrease in the number of students referred for special education services. Only two students were referred for special education eligibility consideration during Year 1, and both were determined to be eligible to receive services. Prior to PST implementation, staff members estimated that approximately 25 to 30 students were referred each year, with 10 to 15 of them ultimately being found eligible to receive special education services. Many at the school characterized this reduction as "slashing the rates" and district personnel frequently cited the "fabulous outcome data" at PVES.

Critical Events Between Year 1 and Year 2

During the summer between Year 1 and Year 2, two district-level decisions significantly and negatively impacted PST at PVES. These actions and
their effects are explained in the discussion section; they are outlined here to provide background information for the Year 2 findings.

**Reduction in Staffing.** The first district-level decision that significantly impacted PST implementation at PVES was the reduction in the school's special education staffing allocation. Specifically, one full-time special education teaching position and one half-time instructional assistant position were eliminated to be commensurate with the number of students classified as eligible to officially receive special education services during Year 2. During Year 1, PVES had three special education teachers and two and a half special instructional assistants. For Year 2, this number was reduced to two special education teachers and two instructional assistants.

Dr. Palmer explained that when schools agreed to pilot PST during Year 1, they were given specific assurance their special education staffing would not be jeopardized if PST resulted in fewer classified students:

> We had a commitment from the school system, right from the top. The associate superintendent, the then associate superintendent, said that for any school doing [PST], if the outcome was fewer inappropriate referrals to special education, and then follow that to the next level, if you had less kids on your roster, then you would not be punished by losing staff. Because, if you were, it was a disincentive to participate in [PST]. Well, that's not what happened. And what actually happened had nothing to do with [PST]. It had to do with who came next, and the way things got restructured. If you didn't have the numbers, you didn't get to keep your positions. And that was totally opposite of the promise.

Despite Dr. Palmer's assertion that the reduction "had nothing to do with [PST]," Mrs. Kelly fervently believed PST implementation caused the reduction in staffing. Within that context, she and others in the building were so concerned about the detrimental impact of this change that they sent a lengthy letter requesting reconsideration by the district administrators (in many places, quoting district literature that was used to publicize PST).

**Elimination of Funding.** The second district-level decision that significantly and negatively impacted PST implementation at PVES involved the elimination of the discretionary funding provided to help every school in the district achieve the goals outlined in their school improvement plan. This reduction was uniquely significant for PVES because the school's improvement plan during Year 1 targeted PST implementation, thus Mrs. Kelly used that money (approximately $7,000) to pay for substitute teachers so PST meetings could occur during the instructional day. Dr. Palmer explained that this funding was critical because it enabled teachers to "have the time to process on a regular basis, in a structured manner."

**PST at PVES: Year 2**

**PST Team Membership.** During Year 2, there were still five grade-level PST teams in existence at PVES. However, the teams no longer included coaches because Mrs. Kelly anticipated the special education teachers and other school professionals who served in this role during Year 1 would not have time to continue in that capacity during Year 2, given the reduction in staffing. In addition, there were only four instances throughout Year 2 where other school professionals joined the general education teachers during meetings: One special educator attended a meeting of the combined kindergarten/first grade team, the other special educator attended a third grade meeting. Dr. Cowell attended a fourth grade meeting, and Mrs. Kelly and the two special education teachers attended a second grade meeting.

**PST Meeting Schedule and Structure.** During Year 2, grade-level PST teams met less frequently than during Year 1. At the beginning of the school year, Mrs. Kelly held a buildingwide staff meeting and indicated that PST teams were still expected to meet twice a month, but meetings would need to take place during teachers' own time (e.g., before school, after school, or during planning periods) because the district eliminated funding used to pay for substitutes. Despite that directive, between September and June the first grade team met only twice; the kindergarten, second, fourth, and fifth grade teams each met only
three times; and the third grade team met only four times.

During Year 2, the structure of PST meetings differed significantly from Year 1 on three key elements. First, rather than consistently using predetermined meeting agendas, teachers typically identified students they wanted to discuss either at the beginning of the meeting (on two teams) or at some point throughout the discussion (on three teams). The lack of structure sometimes had a deleterious effect because not all referral concerns were considered. For example, during the first PST meeting held by the second grade team, the three teachers posed concerns about 15 students at some point during the 95 min period. However, discussion only occurred for 9 of these students. In this instance, there was also a cumulative impact because the summary log from the team’s first meeting was used to structure the discussion during the second meeting. Consequently, the 6 students who were mentioned but not discussed or recorded were not considered at the next meeting.

Second, whereas files were frequently reviewed and referenced during Year 1, they were rarely even brought to the meetings during Year 2. In some instances, this was an inadvertent oversight because responsibility for that task was not designated. On other occasions, an overt decision was made to not review the history, but rather just talk about the services. Third, instead of designating roles during each meeting, the grade-level team leader emerged as the person who structured and controlled the discussion. In this capacity, the team leader asked the majority of questions, was the first to offer an opinion about what actions should be taken, and had the final say about procedures and decisions. The grade-level team leader also frequently assumed responsibility for completing the meeting summary log form. Mrs. Cook somewhat jokingly reflected on this unexpected level of power and responsibility by saying, “I feel like the dictator at the table,” during the second grade team’s initial Year 2 PST meeting.

**The Problem-Solving Process.** Discussions that took place in PST meetings during Year 2 evidenced minimal adherence to the problem-solving steps. Instead of systematically reviewing the information recorded on the referral form and then engaging in problem analysis similar to Year 1, teachers typically introduced a new case with a brief narrative description followed by their opinion of what they felt should happen for the student. For example, Mrs. Pollock presented an initial referral this way:

She’s about a 12 [referring to her reading level] and some days are better than others. Sometimes she can’t even read a little simple word like ‘my’, but other times she does great. Her work habits are pretty good; she’s quieter. I think she also needs to be part of that small group. With the one-on-one, or more one-on-one, she’d definitely do well.

Even when a teacher did not immediately offer an intervention suggestion, problem solving was frequently truncated before the referral concerns were adequately considered and before interventions were identified. For example, Mrs. White reported that a student knew her math facts, but had mastered only 26 of the 54 expected objectives “because of other things” that get in the way of her learning (i.e., difficulties at home). Mrs. Cook responded, “Yeah, those other things. But we’re going to just leave it alone.” Mrs. White clarified, “So we’re just going to monitor her?” and was told, “Uh huh. Continue to monitor.”

Team discussions also rarely focused around possible intervention strategies the referring teacher could implement. For example, Mrs. White offered this elaborate explanation:

He needs directions repeated, like two or three times. Like for instance, if you say, “How do you spell read?” I say, “You need to tell me what the first two letters are.” And then I go, “rrrrr-eeeee” and he’ll go, “r-e.” And then I say, “The next letter we can’t hear, so I’m going to have to tell you that one. It’s ‘a’. So what are the first three letters?” and he sounds the word out all over again “r-e-a.” And then I say, “What do you hear?” and we do ‘d’. Then he goes back to the computer to write read, and he comes back and asks me how to spell read. So, you know, there’s a short-term memory thing, and I don’t want to diagnose it because I’m not sure, but I don’t know what else to do.

However, rather than discussing these concerns further or identifying ways to address the
difficulties, the team spent 8 min discussing that they believed the student should have been retained and another 6 min questioning whether his parents are fluent in English. Ultimately, no classroom interventions were recommended. Mrs. White was told to check whether the student passed his hearing and vision tests, and he was recommended to participate in the skills group (which, however, never materialized).

**PST Documentation.** In September of Year 2, Mrs. Kelly indicated that her expectations relating to PST documentation remained the same as they were for Year 1. However, almost immediately, teachers at all grade levels contentiously insisted that they did not have time to complete the district’s referral form. In response, Mrs. Kelly simplified and condensed that form into a one-page outline requiring teachers to identify basic information (e.g., primary language, number of school changes, previous concerns and interventions, and attendance data). She also replaced the district’s forms that corresponded with each problem-solving step with a one-page meeting summary log that contained five headings: (a) Student, (b) Discussion Summary, (c) Action Items, (d) Person(s) Responsible, and (e) Follow-Up Date.

However, despite these changes in the requirements related to PST documentation during Year 2, the referral form was not used by the second grade teachers and was rarely used by teachers at other grade levels. The meeting log was used more frequently, but did not consistently include accurate descriptions of the teams’ dialogue and decisions. Some of the primary issues included recording reading levels inaccurately and not listing recommendations that the team discussed on the form. In one case, information about a second-grade student who was discussed for 20 min was not recorded at all. The overall precision, breadth, and depth of what was recorded also contrasted significantly with the documentation maintained during Year 1. For example, in contrast to Year 1, typical comments for Year 2 in the Discussion Summary column of the forms completed by each grade-level team included: “inconsistent, trouble with language, stalling, trouble with reading, thick glasses, received Wilson last year, very chatty, below grade level, going to psychiatrist” and “distracting the class, minimal progress issue, new student 0 background.” Additionally, listed action items in contrast to Year 1 included, “Can she get more services?” “Call home,” “Look at hearing/vision,” “Speak w/ [Mrs. Kelly] about next steps,” “Has he been to the doctor?” “None at present,” “Continue to monitor progress,” “Collect data,” “Work with more,” and “Contact mom.”

Whereas the general education teachers made negative and disparaging comments about the PST documentation requirements, the special education teachers and other nonteaching professionals expressed disappointment in the differences they noticed during Year 1 and Year 2. For example, Dr. Cowell reflected:

The kids who had been brought through [PST] last year are kids that I felt comfortable moving rapidly on, which goes to speak to the value of [PST]. . . . I knew what’s been tried. I knew the interventions had been done with some integrity. I knew that if the kids still weren’t making progress now after all those things had been done and documented, that it was appropriate to move forward. The kids that have come through this year’s, quote-unquote [PST] process, stuff looks a lot more sketchy. The data and documentation are not there.

**Data.** During Year 2, teachers rarely collected or used any additional data as part of PST beyond that which was required by the district for all students. Consequently, the data considered by teams were not nearly as precise or ideographic (e.g., general reading level versus a student’s mastery of high-frequency words) as it was during Year 1. Data were also collected much less frequently (e.g., every other month versus weekly). For example, Mrs. Cook described her concerns about a student’s work habits this way:

He has a little ‘tude and he won’t do his work. The other day he definitely didn’t have his medication. I said, “Put that book down right now,” because it was like already the third time I asked him, and he sat right there and read another sentence. He’s oppositional.

Mrs. Pollock summarized a student’s progress using this description:

You know, we see him making some progress academically and he’s usually motivated. But, you know, he’s below grade level in reading,

*Exceptional Children*
and math he's maybe at grade level. Math is more of a strength for him. He likes math a lot. He needs more practice with subtraction with regrouping, but he's doing better . . . but at the low end.

When quantitative data were presented, the most commonly referenced metrics were a student's reading level or math unit test score. Sometimes, these were offered as a precise evaluation of student performance (e.g., "He's a fourteen, just fresh today."). However, more frequently it was approximated (e.g., "He's a two, maybe. I mean it hasn't progressed."). When a student's specific reading level was not known, descriptions such as "really low," "just making it," and "not as far below as these others we're talking about" were offered. Behavioral descriptions were characterized with vague terms such as "oodles" and "sometimes." Data were also rarely used to identify appropriate interventions for individual students. For example, even when the information presented about referred students suggested they had different needs (e.g., basic math skills, memory concerns, reading difficulties, or attention, issues), recommendations were typically unilateral (e.g., call parent or refer to skills group).

When asked about the contrast with how data were used during Year 1, teachers at all grade levels indicated that it was unrealistic for them to collect additional data because their time was monopolized by other responsibilities. The written response probe completed by Mrs. White after the initial Year 2 PST meeting illustrates this perspective:

This meeting took the only planning time I have on that day. My lunch half hour was spent listing the concerns for each student. Our school day is so full and adding additional data collecting can become overwhelming for the large number of students involved in [PST]. It's a catch 22 because the data is beneficial to the child and the teacher.

Referrals and Interventions. During Year 2, approximately 60 students were discussed by grade-level PST teams. As with Year 1, referral concerns reflected both academic and behavioral difficulties, and more referrals were made for students in kindergarten through second grade, as opposed to those in third grade through fifth grade. A closer look at the 17 students referred to the second grade PST team during Year 2 offers additional insight about the nature, severity, and validity of referral concerns. (Any student at least mentioned during a PST meeting is considered to have been referred, as this indicated one of the teachers sought help to meet that student’s perceived needs.) For 14 of these 17 students, the referring teacher identified academic concerns (7 students for reading; 2 students for math; 3 students for reading, math, and written language; and 2 students for unspecified academic concerns). Four of the 14 students referred for academic reasons were also described as having difficulty sustaining attention and focusing in the classroom. For 3 of the 17 students, the teacher’s primary concern was behavioral issues (i.e., inattention and excessive activity). Nine of the 17 students discussed by the second grade teachers were discussed by the PST team during the prior year. Four of the 17 referred students were already classified as having a speech and language disability, 1 student had a 504 Plan for attention concerns, and 2 referred students received supplemental English as a Second Language instruction.

The second grade teachers’ descriptions of concerns were found to be valid. For example, of the students referred because of reading difficulties, four students were two quarters below the district’s reading standard, two students were three quarters below, three students were 1 year below, and one student was 1½ years below the standards. However, the totality of students’ difficulties was frequently not identified. For example, one student referred solely for math concerns was also more than 1 year below the district’s expectation in reading. Similarly, three students referred for reading concerns and one student referred for behavioral concerns also experienced significant difficulties in math. There were also at least seven other second grade students experiencing significant difficulties in reading, but were not referred for problem solving by any of the second grade teachers.

During Year 2, a PST referral had little or no impact on students’ experiences. This occurred for three reasons. First, the majority of recommendations made during the PST meetings involved Action Items (e.g., contact parent, speak with previous teacher, or consult psychologist).
Although none of these Action Items were intended to directly impact students' experiences, it was implied that the corresponding information would be used to develop an intervention plan at the team's next meeting. However, the necessary follow-up rarely occurred, and in the few instances that it did, it was not subsequently used. Second, the few direct interventions recommended during PST meetings were rarely implemented. For example, participating in a skills group was the recommendation made by the second grade PST team for eight referred students. However, the skills group never materialized, thus no intervention occurred for those eight students. Third, PST teams no longer had the option to recommend that a student receive early intervention support. After the district reduced the school's staffing allocation, the special education teachers focused their efforts on students officially eligible to receive services. Thus, whereas early intervention support was an integral component of PST during Year 1, it became a coveted, yet elusive, commodity during Year 2. As Mrs. Kelly explained, “teachers are desperate for help” because they directly related early intervention support with improved student achievement. For example, when discussing a student referred to the PST team in first grade, Mrs. White explained:

Last year he was below grade level in reading. He received Wilson starting in March and it really helped him, I think. But then there hasn’t been any this year. That is why he is struggling and I don’t know what to do.

As the school year progressed, the sense of urgency for getting support increased steadily. This is illustrated by Mrs. Pollock’s written response probe after the third (and last) PST meeting held during Year 2: “Outcomes are s-l-o-w. Too many 'let's monitor progress.' It’s March!! I’m concerned about all of the students we’ve been discussing. What can happen in 3 months? What will happen next year?” On the side of the paper she wrote “Extra support” in bold letters and circled it, communicating how important she perceived that extra support to be.

Based on their experience with PST during Year 1, teachers expected that they would be able to access early intervention support for students if the PST team felt it was appropriate. The realization that this was not an achievable goal during Year 2 fostered frustration, anger, and disenchantment with PST among teachers at all grade levels. Many even expressed a desire to revert back to using the model that preceded PST because, as Mrs. Cook explained, “[A]fter I had done all my stuff, and unofficially talked to other people, I just filled out the form to get the support.” This comment clearly distressed Dr. Cowell because she immediately responded, “And the kid was tested and labeled.” However, the ultimate goal behind teachers’ calls for a reversion to the old process was not necessarily to find students eligible for special education services. Rather, it was to secure support from a specialist in the building to work directly with the identified student. Unanimously, teachers expressed feeling overwhelmed by district-level demands and the expectations placed on them (e.g., implementing a new math curriculum). In many instances, they also indicated that they did not understand students’ difficulties, nor did they have any additional ideas for possible classroom-based interventions. Consequently, they maintained that the only way to effectively address the needs of some students was with additional support, and the only way to get additional support was to move towards special education classification. Mrs. Cook explained:

I just know that I need support for some kids. I don’t give a (care) what you call it or how I get there. I don’t care if you call it PST; I don’t care if you call it Blue. But with some of these kids I feel like I could stand on my head and spit nickels and it won’t matter. And I know some people would say that’s a negative attitude, you don’t think a child can learn. No, that’s not what I’m saying. I’m saying that I am spent. I have used all of my regular ed, special ed, every ed kind of trick and given them as much as I can give individually to one of 26. . . . They’re not really special ed kids, but they need 1 hr more a week or one teacher more a week than the average Joe. I have taught for so long and seen the students for so many years, I have a gut. And I know these kids’ backgrounds, I know their families, I know their relatives. I know what they get at home, and I know which ones, if I could just prop them up, they could do it. They could succeed. But they need the prop. And I can’t prop with 26
and with six or seven IEPs that are mostly unsupported.

**Student Outcomes.** Given the absence of interventions that were actually implemented by general education teachers and the lack of early intervention support during Year 2, it is not surprising that referred students did not evidence significant achievement gains over the course of the year. For example, not 1 of the 10 second-grade students referred for reading difficulties made enough progress to meet the district's grade-level reading expectations in June. Two students increased their rate of progress, but only by one quarter's growth (e.g., reading level was three quarters below average in the fall and two quarters below average in June). The other eight students did not maintain the expected rate of progress, so they were further below the grade level expectation in June than in September.

Regarding special education rates at PVES, the significant reductions achieved during Year 1 were not maintained during Year 2 due to the school's deliberate effort to counteract the staffing reduction. In November of Year 2, Dr. Cowell explained:

I just got a list of about 15 or 18 kids they want evaluated before the end of the year so that they can rebuild their special ed numbers so they can get their positions reinstated. It's so sad, 15 or 18 kids.

Ultimately, 17 students were found eligible to receive special education services during Year 2. Thus, the rate appeared to exceed that which was experienced prior to PST implementation.

**DISCUSSION**

Qualitative research is particularly well suited for illuminating the complexity of educational environments and ethos because the data captures multiple perspectives within real world settings (Miles & Huberman, 1994). With this study, multiple sources of data were systematically and persistently collected, coded, analyzed, and interpreted to create a descriptive model of PST at PVES and to explore what factors influence implementation and sustainability. Throughout this study, the general and special education teachers, Mrs. Kelly, and other school professionals at PVES consistently demonstrated genuine concern and dedication to their students. It would be inaccurate to conclude that apathy prevented successful implementation and, in turn, jeopardized student progress. It was unequivocally documented that the staff, and especially the general education teachers, struggled to effectively address students' multitude of needs after the district reduced the school's staffing and funding. Additionally, because PST was so successful during Year 1, the experiences during Year 2 were regarded as even more frustrating. Mrs. Kelly explained:

It's so painful to watch. [Teachers] know what they should be doing. They know what these kids need. But, they just can't do it this year. So, they know they're letting me down, and more importantly, they know they're letting the kids down. And that piece is so difficult for them.

The findings of this study extend our understanding of CPS implementation and sustainability in several important ways. The results provide reliable and valid evidence to support conclusions regarding the potential benefits of CPS. PST implementation at PVES during Year 1 demonstrated that implementing a comprehensive CPS model with integrity can (a) increase collaboration among professionals (Bahr et al., 1999; McDougal et al., 2000; Ormsbee & Haring, 2000; Welch et al., 1999); (b) produce significant and meaningful academic and behavioral improvements among referred students (Burns & Symington, 2002; D. Fuchs et al., 1996; Kovaleski et al., 1999; Telzrow et al., 2000); (c) improve teachers' ability to gather, interpret, and use data and implement instructional strategies (Bahr & Kovaleski, 2006; Batsche & Knoff, 1995; Ingalls & Hammond, 1996); and (d) decrease the number of students referred for special education evaluation (Burns & Symington; McDougal et al.; McNamara & Hollinger, 2003). The findings from this study also offer a unique contribution to our knowledge by illuminating salient factors that impact CPS implementation and sustainability and likely have implications for implementation and sustainability of other educational practices.

Reflecting on PST implementation during Year 1, Dr. Cowell explained, "Collectively, things were just right. You know, it was that everything came together, like the sun and the moon and the stars were all in the right place in the sky." In contrast, by December of Year 2, Mrs. Kelly lamented how PST implementation was detrimentally impacted by the staffing reduction and the elimination of the school improvement funding. She specifically praised PVES's teachers for maintaining their philosophical belief in PST, but simultaneously explained that their other responsibilities superseded fidelity to the process during Year 2. She independently concluded, "The sun, the moon, and the stars are just not aligned for [PST] anymore." This celestial reference was reiterated by others at PVES on a number of occasions. Ultimately, as the data from this study were synthesized and analyzed, this phrase provided an apt analogy for understanding how the district, the principal, and the teachers all impact PST implementation and sustainability (Patton, 2002). As described next, the sun represents the school district, the moon represents the principal, and the stars represent the teachers.

THE SUN: THE SCHOOL DISTRICT

There is a strong relationship between a school district's level of support and the successful implementation and sustainability of CPS (D. Fuchs et al., 1996; Marston et al., 2003; Telzrow et al., 2000) and other educational reform programs (Sindelar et al., 2006). Data from this study provided additional evidence to support that conclusion. Although previous findings primarily highlighted the logistical impact of district support, data from this study provided strong evidence that district support has a cascading and significant influence on motivation, commitment, and program efficacy.

When Mrs. Kelly believed district resources were inadequate and implementation was no longer a district priority, enthusiasm for and commitment to the process were significantly diminished at the building level. In turn, this diminution reduced classroom teachers' willingness to participate which ultimately impacted student outcomes. Specifically, when the district reduced the special education staffing allocation at PVES, Mrs. Kelly said she felt "betrayed [and] bewildered" because the staff reduction appeared to penalize the school for all the time and effort she and the staff devoted to achieve successful PST implementation during Year 1. Without the third special education teacher and half-time instructional assistant, she believed it was impossible to continue providing early intervention support. She explained:

We're trapped in a vicious cycle. First, we're told to use [PST] and offer early intervention because it eliminates the need to code. And we did. And it worked. We slashed our [special education] roster. But then they took away the positions that allowed us to do [early intervention]. We talk about setting students up for success, but we can't even set ourselves up for success. The worst part is that this year, I won't have the staff, no matter what. So even if we code, it'll only help for next year. I'd rather code no one, but we need staff to service based on need. And right now, that's not the game that's being played in this town.

When the school improvement funding was subsequently eliminated, Mrs. Kelly's disenfranchisement with the district and PST increased to where she no longer creatively allocated resources to maintain the organizational structure for PST implementation at PVES (Purcell et al., 2007). She could have, for example, used staff development money to pay for substitute teachers so grade-level PST teams could meet during the instructional day, as they did during Year 1. Teachers at PVES also indicated that with some recruitment and training, parent volunteers, paraeducators, and others in the building could continue providing early intervention support during Year 2. However, Mrs. Kelly's visceral response to the district's actions minimized her desire to actively pursue options which may have enhanced PST implementation during Year 2.

Principals have been noted to play a critical role in successful CPS implementation (Hammond & Ingalls, 1999; Kovaleski et al., 1999; McDougal et al., 2000; Rafoth & Foriska, 2006) and successful implementation of other reform efforts (e.g., Desimone, 2002; Sindelar et al.,
2006). However, given the increase in principals' responsibilities, Fullan (2001) poignantly asked, "If effective principals energize teachers in complex times, who is going to energize principals?" (p. 141). Data from this study indicated that Mrs. Kelly frequently felt overwhelmed by increased responsibilities and accountability. Because she already struggled with dissonance related to PST, stress from other responsibilities cumulatively decreased her willingness to devote time, effort, and emotional energy towards implementation during Year 2.

Within that context of heightened stress, district facilitators and other key insiders and outsiders are shown to help alleviate some of the principal's responsibilities related to implementing CPS and other reform initiatives (e.g., L. S. Fuchs & Fuchs, 2001; Purcell et al., 2007). Specifically, an effective facilitator helps create and maintain enthusiasm, helps the principal assume an appropriate level of participation, helps modify and adapt procedures to meet a school's unique needs, helps support and monitor implementation, and ensures that district and school efforts are coordinated. Data from this study suggested that PST implementation at PVES would benefit from the district's assignment of an effective facilitator. However, that did not occur because the district facilitator assigned to PVES was minimally involved at the school and did not enhance implementation. During Year 2, the facilitator visited the school three times, but on each occasion, his comments and suggestions were perceived by the PVES professionals as being inappropriate and irrelevant.

Similarly, none of the PVES professionals believed that Dr. Palmer, the district's PST supervisor, understood the challenges associated with implementation during Year 2. He visited the school only once during Year 2. During this visit, he told the faculty he would arrange for professional development workshops and a meeting with the associate superintendent so they could express their frustrations. However, neither of these promises was seen to fruition, further diminishing perceptions regarding the district's commitment to PST.

During Year 2, many school professionals at PVES expressed a desire to have an active and supportive PST facilitator and PST supervisor. They believed such people could illuminate how other schools maintain high implementation integrity, creatively schedule grade-level PST meetings, and offer early intervention support. The principal also noted that if relevant suggestions were offered, she was willing to try new procedures. In other words, even though the staff at PVES did not benefit from an effective district facilitator or supervisor, they indicated potential receptivity to that support.

**THE MOON: THE PRINCIPAL**

Mrs. Kelly's commitment to successfully implement PST at PVES was significantly diminished in response to the district's reduction in support for Year 2. During Year 2, she articulated the expectation for all teachers to actively participate in PST. However her message lacked the enthusiasm and authenticity that was omnipresent during Year 1. Rather than using words that encouraged and inspired teachers to actively participate in PST, her descriptions during Year 2 were characterized with defeatist connotations that chastised the district's actions. By November of Year 2, Mrs. Kelly's sentiments were adopted and internalized by the teachers and other professionals at PVES. As such, they repeated her interpretation that the staff reductions were punitive and, when combined with the loss of school improvement money, precluded successful PST implementation. Consequently, motivation to participate in PST at PVES rapidly declined.

That pattern mirrored previous findings that a principal's level of enthusiasm and positive feedback significantly influence the success of CPS (Kruger et al., 1995; McDougal et al., 2000) and other educational reform efforts (Boudah, Logan, & Greenwood, 2001; Desimone, 2002). For example, Fullan (2001) described how school culture is only conducive to sustaining reform efforts and programs when the principal is able to motivate and energize teachers (especially those who are skeptical of change). During Year 1, Mrs. Kelly's positive attitude and pervasive enthusiasm successfully facilitated PST participation at PVES, even with many teachers who did not initially endorse PST. Her contagious enthusiasm created an environment which developed and amplified oth-
ers' perception of the process. Mr. Baldwin explained,

Some of us were supporters from the get-go. We believed in inclusion, and so we believed in [PST], too. For those who maybe didn't exactly understand what it was at first, she sort of swept them up. And before long, they were, too, like, going around championing how [PST] worked in the interest of all the kids.

In contrast, during Year 2, Mrs. Kelly’s lack of personal motivation and commitment prevented her from engendering school professionals’ sense of meaning, importance, or enthusiasm towards PST.

During Year 1, Mrs. Kelly maintained high levels of control and participation with PST at PVES. She chose to initially pilot PST, established the school’s implementation structure and meeting schedules, frequently served as the facilitator during grade-level meetings, and personally reviewed nearly every PST referral that teachers submitted. Her consistent participation during grade-level meetings and her active enforcement of PST expectations translated into high implementation integrity at all grade levels (Kovaleski et al., 1999; Kruger et al., 1995; McDougal et al., 2000; Rubinson, 2002). The experiences at PVES demonstrated that principals need to establish a balance between offering support, providing pressure, and allowing independence with CPS as was shown to be the case with other reform initiatives (e.g., Sindelar et al., 2006). At PVES, Mrs. Kelly’s high level of control and integral participation with PST during Year 1 may have ultimately jeopardized the sustainability of the process. Although teacher involvement was shown to increase ownership for reform efforts and to improve sustainability of programs (e.g., L. S. Fuchs & Fuchs, 2001), teachers were not involved in the development or modification of PST procedures at PVES. Consequently, when Mrs. Kelly’s personal commitment and direct participation with PST waned after Year 1, implementation integrity was significantly reduced because teachers had not yet assumed ownership or shared responsibility for the process.

**The Stars: Teachers**

Teachers at PVES repeatedly explained that active participation in PST during Year 2 was significantly hindered by their many other demands and responsibilities such as learning and implementing new curriculum; giving, scoring, and interpreting mandated bi-weekly assessments; and lacking specialist support. Teachers’ burgeoning responsibilities are well-documented and frequently associated with rigorous curricular demands, large class sizes, increased accountability for student success, and increased diversity within the classroom (e.g., Fullan, 2001; Rubinson, 2002). The divergent PST implementation experiences at PVES illustrate how the overwhelming demands of the daily “classroom press” created anxiety and stress among teachers and diminished their willingness and ability to participate in PST (Fullan, p. 31). During Year 1, teachers believed active participation in PST was feasible because grade-level meetings were held during the instructional day. In contrast, during Year 2, teachers animatedly expressed that, because of competing demands on their time, active participation in PST outside of the instructional school day was not realistic. PST was no longer congruent with their expectations and goals for collaboratively understanding and addressing students’ needs. Consequently, active and constructive participation was no longer a priority.

In addition to believing that active participation in PST was not feasible during Year 2, teachers’ participation was influenced by the fact that they no longer viewed the outcomes of PST as beneficial (e.g., Hammond & Ingalls, 1999; Slonski-Fowler & Truscott, 2004). During Year 1, participation in PST provided teachers with the opportunity to collaborate with the special education teachers and other school professionals and allowed them access to early intervention support for students. During Year 2, other school professionals were not consistently involved in PST, and early intervention support was no longer available. Thus, teachers saw little reason to devote their coveted time and energy to PST, despite evidence of significant student need.

As was observed at PVES during Year 2, general education teachers frequently assumed primary responsibility in the problem-solving
process including implementing and monitoring recommended interventions (Buck, Polloway, Smith-Thomas, & Cook, 2003). Previous research and data from this study indicated that general education teachers do not always select appropriate interventions, collect and accurately interpret data, nor independently implement academic and behavioral interventions (e.g., D. Fuchs et al., 1990; Knotek, 2003). However, when general education teachers collaboratively participated in CPS with other school professionals, these concerns are minimized (e.g., Kovaleski et al., 1999; Rosenfield & Gravois, 1996). Data from PVES highlight that collaboration among general education teachers, special education teachers, the psychologist, the principal, and the counselor was beneficial. Whether these other school professionals served as grade-level coaches or as participants in grade-level meetings, their inclusion helped compensate for teachers' limited knowledge and skills. This, in turn, significantly enhanced the problem-solving process and outcomes. Collaboration also increased implementation integrity with classroom interventions and facilitated access to early intervention support. Finally, when general education teachers believed that other school professionals shared the responsibilities associated with PST, their perceptions were enhanced and their level of participation increased.

**CONCLUSIONS: ALIGNING THE SUN, THE MOON, AND THE STARS**

Successful implementation and sustainability of PST at PVES was depicted as analogous to the proper alignment of the sun, the moon, and the stars. The findings from this study extend our knowledge of CPS because they provide a deeper understanding of this analogy. At the most basic level, it was found that no single factor or decision determined whether CPS was successfully implemented or sustained. Establishing that premise was critical, because the majority of school professionals at PVES chided the district’s actions as solely responsible for the deterioration of PST during Year 2.

District support for CPS is indisputably important. This includes giving release time for teachers to meet, providing adequate staff so early intervention support is offered, and assigning effective facilitators to promote implementation at individual schools. When such support is provided, other potentially inhibiting factors are minimized (e.g., increasing teacher responsibilities and lack of ownership among teachers). When adequate support is not provided, when a district has multiple (competing) initiatives, and when district decisions are not aligned with the goals of CPS, there is a negative impact on the logistical ability to successfully implement the process. Inadequate district support also creates a cascading effect that negatively influences the principal’s and school professionals’ level of motivation and participation and ultimately student outcomes. When a principal feels implementation is adequately supported, his or her level of enthusiasm and participation is positively influenced. Conversely, if a principal believes district support is inadequate, or that implementation is not valued, it is less likely he or she will actively participate or creatively allocate resources at the school level. In turn, teachers’ levels of motivation and participation are influenced by the principal’s beliefs and actions as well as by their own perceptions about whether participation is feasible or beneficial to their students. Finally, shared ownership and collaboration among staff members enhances adherence to the problem-solving steps as well as teachers’ levels of motivation and participation.

**IMPLICATIONS FOR PRACTICE**

This study involved documenting how a comprehensive CPS process was implemented at an elementary school over a 2-year period. The findings represent the experiences and perceptions of general education teachers, special education teachers, several nonteaching professionals, the principal, and the district’s PST supervisor. Perhaps one of the most surprising discoveries is that even when describing their frustrations with implementing PST during Year 2, the staff at PVES unanimously described the desire to use CPS because of the potential benefits CPS has for teachers and students. Thus, the challenge is to
translate this philosophical endorsement into successful implementation and sustainability within the realities and constraints of educational environments. Specifically, consideration needs to be given to the fact that CPS is dependent on factors related to the district, the principal (or other building administrators), and participants. Within that context, recommendations for practice are offered.

First, district-level policies and decisions need to consistently support CPS implementation with adequate funding resources and school-based flexibility. They also need to reflect the understanding that, if successful, CPS reduces the number of students classified as eligible to receive special education services. However, successful implementation does not reduce the need for special education teachers to provide academic and behavioral support to students experiencing difficulty in general education classrooms. Second, principals (and other building administrators) should understand and enthusiastically support the goals and procedures of CPS. Specifically, this involves ensuring that all school professionals collaboratively participate and giving positive feedback when successful outcomes are achieved. It also involves creatively allocating resources to provide ample time for problem-solving teams to meet and to ensure that appropriate support and interventions are available for referred students. Finally, general education teachers, special education teachers, and other school professionals need to understand, endorse, and prioritize participation in CPS. Even when district resources are limited (or reduced), it is imperative to find creative ways to ensure that teams meet on a regular basis, the problem-solving process is implemented with integrity, and appropriate support is provided to students.

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The author would like to express great appreciation to Karen R. Harris, Jeremy N. Price, Steve Graham, Sally Rivenburgh, and the wonderful staff at Pleasant Valley Elementary School. Your guidance, encouragement, and insight were truly invaluable.

Manuscript received June 2007; accepted December 2007.

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