Effects of Positive Unified Behavior Support on Instruction

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Positive Behavior Support (PBS) is a broad range of systemic and individualized strategies for achieving important social and learning outcomes while preventing problem behavior (Sugai et al., 2000). PBS involves the assessment and reengineering of environments so that reductions in problem behaviors are evident and children experience an increase in the social, personal, and professional quality of their lives (Horner, 2000; Horner, Sugai, and Vincent, 2004 and others). PBS targets a broad set of variables as a base for changing a person's behavior (cf. Horner, Sugai, and Vincent, 2004 and others).

Teachers and other professionals in schools implementing positive behavior supports reinforce positive behavior and teach alternatives to aggressive and other misbehavior (Horner, 2000 and others). They ensure that all staff, parents, students, and community members are informed about problem behavior, what they can do to counteract it, and how they can reinforce and reward positive behavior. In turn, the entire school community makes a commitment to behaving responsibly.

Teachers and other professionals in schools implementing positive behavior supports develop and consistently enforce school-wide rules that are clear, broad-based, and fair (Horner, 2000 and others). Representatives of the total educational community develop rules and procedures collaboratively. They are clearly communicated to all parties but most importantly, there are clear expectations that they are followed consistently by everyone and intervention fidelity data are regularly gathered to support and/or serve as a basis for program adjustments (Horner, Sugai, and Vincent, 2004 and others).

Teachers and other professionals in schools drawing on positive behavior supports implement a continuum of research-based strategies based upon the well-grounded knowledge base on behavior interventions (Brown, Conroy, Fox, Wehby, Davis, and McEvoy, 1996 and others). They use strategies that are not reactive, but instead are efficiently proactive to behavior problems that may arise within their school. The research base for implementing school-wide systems of positive behavior support is grounded in records of discipline problems across settings (e.g., schools and

classrooms), locations (e.g., halls, playgrounds, and cafeterias) and groups of students (Eber, Sugai, Smith, and Scott, 2002 and others). Office discipline referrals are a common marker for changes resulting from the use of positive behavior supports (Horner, Sugai, Todd, and Lewis-Palmer, 2005 and others).

While a body of knowledge regarding important outcomes related to school-wide behavior interventions is emerging, little is known about changes occurring in classrooms where these interventions are being implemented. We were interested in documenting how teachers 'do business' when implementing a specific approach to positive behavior support and in comparing 'this way of business' to that evident in a school implementing unsystematic approaches to discipline and behavior support.

Method

Positive Unified Behavior Support (PUBS) is a school-wide intervention designed to establish uniform attitudes, expectations, correction procedures, and roles among faculty, staff, and administration. PUBS is grounded in the general principles of positive behavior support and represents a straightforward, practical implementation model. When implementing PUBS, administrators, teachers, and other professionals teach behavior relentlessly by promoting similar attitudes, rewarding school and class rules and expectations with high levels of praise and prompting, using a unified correction procedure to address inappropriate behavior and adopting mutually supportive roles and responsibilities.

While an ultimate goal of school-wide interventions is improved learning, we reasoned that documenting differences in how they are implemented was an important first step in continuing research related to positive behavior support. Therefore, the purpose of this study was to examine the effects of PUBS on key instructional variables: (a) frequency of teacher reinforcement, (b) frequency of teacher correction, (c) reinforcement/correction ratio, (d) degree of teacher monitoring, and (e) voice tone used during teacher correction, and (f) total rule violations. The key research questions for the study are:

1. To what extent do PUBS trained teachers demonstrate a significantly higher level of student reinforcement?
2. To what extent do PUBS trained teachers demonstrate a significantly lower level of student correction?
3. To what extent do PUBS trained teachers demonstrate a significantly higher reinforcement to correction ratio?
4. To what extent do PUBS trained teachers demonstrate a significantly higher level of active student monitoring?
5. To what extent do PUBS trained teachers demonstrate a significantly higher level of use of warm voice tones when correcting student misbehavior?
6. To what extent do PUBS trained teachers experience a significantly lower level of rule violations?

Setting and Participants

The study took place in the 23rd largest school system in the nation; the total school population was over 120,000 when the study was completed. We gathered observations of classroom behavior in Willowette Elementary School during the final year in which a school-wide positive behavior support program was being implemented as part of a federally-funded research project. For comparison purposes, observations were also completed in a companion school with similar demographics and no systematic approach to classroom discipline (i.e., each teacher was responsible for his or her classroom and no common, school-wide approach was evident). Seventeen teachers (i.e., approximately one-third of all certified staff members) were selected to participate from each school and students with disabilities were included in each of their classrooms.

The treatment school setting was one of high risk for serious academic and behavior problems. Thirteen percent of students at Willowette (n=96) were classified as needing special education and many of them (approximately twice the number of most other schools within the district) were classified with emotional disturbance. Greater numbers of students in Willowette participated in free or reduced lunch programs, came from families with incomes below $25,000, and were absent 18 or more days during the school year. Fewer students lived with families in which both parents were living at home or participated in gifted and talented programs offered by the school district. Willowette was among the lowest schools in the district in terms of school achievement

and among the highest schools in numbers of students participating in special education programs for students with emotional and social problems. Additionally, students leaving this school and participating in middle and high school programs had high rates of teen pregnancy and dropout.

A comparison school, Ellington Park, was randomly selected from a group of elementary schools with similar demographics. The context and important demographics were comparable in both schools and the picture was one of children whose academic careers and lives were in serious need of improvement, much like those described by Jonathon Kozol (1992, 1996) in *Savage Inequalities and Amazing Grace*. Teachers at Ellington Park were not using systematic or positive behavior interventions and supports to address their students' needs.

End-of-grade achievement on statewide reading and mathematics assessments was comparable across both schools during the previous school year. Less than 50% of the third, fourth, and fifth graders at Willowette and Ellington Park demonstrated mastery on reading tests; 50-60% performed at mastery levels in Mathematics; this level of performance was 10-15% lower than district averages at similar grades.

Procedure

Schools were randomly assigned to the treatment or control condition and teachers were randomly selected within each school for participation in this observational study. Teachers in the experimental school received professional development and coaching related to implementation of Positive Unified Behavior Support. Graduate students were trained in use of the PUBS Observation System. Trained observers completed school-wide assessments of key aspects of classroom instruction as evidence of the effects of implementing positive behavior supports and interventions in elementary school classrooms.

Intervention. Prior to intervention, at least 80% of the teachers in a school were asked to indicate support for implementing PUBS. At Willowette, the vote was completed prior to providing the initial professional development after the school's leadership and administrative team was briefed on the program and unanimous support was provided by the 84 staff members attending the introductory meeting. The initial professional development entailed a three-hour school-wide in-service followed up by individualized peer coaching and administrative assistance.

Unified attitudes are achieved through a collective agreement among school faculty, staff, and administration to shift from aversive management to positive behavior support practices. To make this shift happen, teachers learned about the importance of reinforcement strategies, direct instruction of behavioral performance, and corrective teaching as a preferred response to misbehavior. Teachers also learned to forgo self-defeating attitudes concerning behavioral instruction (e.g., 'The student's poor parenting makes him impossible to teach. There's nothing I can do to help this student.'), and to respond to misbehavior without anger or emotional upset. Unified attitudes were evident through demonstration of high levels of reinforcement and use of warm voice tones during corrective teaching.

Unified expectations were achieved by having teachers develop a set of school-wide rules prior to the beginning of school for students. Teachers were permitted to have the same rules for K-2 and 3-5 or K-5 classrooms and received assistance creating the following positively-stated rules to be used as unified expectations for school-wide behavior: 1. Follow all teacher directions promptly; 2. Stay on task in your assigned area; 3. Talk only when it is your turn; 4. Keep hands, feet and objects to yourself; and 5. Respect the rights and property of others. Teachers taught the rules directly during the first month of school and maintained their use with specific praise (e.g., 'Good job following my directions. You are 'all over' Rule 1.') at a ratio of three to one relative to corrective teaching events. In all participating schools, classroom rules were posted in a prominent location in each classroom where all children could see them. Periodic random checks by graduate assistants confirmed continuing use of the unified rules as well as recognition of them by administrators, teachers, and children in the school. Scores in the treatment school (80-100%) were consistently higher across all dimensions of the School-Wide Evaluation Tool than in the comparison school (40-60%).

The *unified correction procedure* involved three steps. First, the rule violation was acknowledged and a precise direction was provided for a positive replacement behavior (e.g., 'Jason you're out of seat. Please show me Rule Three – Remaining in seat'). The second step in the corrective teaching procedure involved the teacher reinforcing with praise, the

student's self correction (e.g., 'Good job complying with Rule Three.') The final step of the corrective teaching procedure entails the teacher encouraging future rule compliance (e.g., 'Now that you've shown me that you understand Rule Three, I don't think you will have anymore trouble with it). After three rule violations, a student was 'passed' to another teacher in another classroom to provide an opportunity to prevent the problem from escalating. When the student returned to the class after a 10-15 minute pass, the teacher welcomed him or her back and focused the student's attention on the school-wide expectations for positive behavior. If the student received two additional corrections, after a class pass, the teacher initiated an office disciplinary referral requiring support and intervention from the administrative team in the school. Options exercised by the administrative team included: Time in the office, loss of privilege, a conference with the student, parent contact, detention, individualized instruction, in-school suspension, out-of-school suspension, and expulsion. Office disciplinary referrals were also made for any single infraction that involved a threat to the safety of students or others (i.e., violation of school district's Code of Conduct).

Administrators in PUBS schools were encouraged to reinforce teachers frequently when they observed a PUBS practice (including appropriate office referrals) and used corrective teaching if inappropriate office referrals were received or if aversive management practices were observed. Teachers in turn were encouraged to support and not second-guess decisions made by administration post office referral. These mutually supportive actions between administration and faculty were evidence of support for *unified roles* necessary for implementation of a school-wide behavior support program.

Instrumentation. The observational coding system developed for PUBS and employed in this study included four sections. In the first quadrant, the observed tallied each event of teacher use of reinforcement. In the second quadrant, the observer tallied each event of teacher instruction of behavior through rule reminders, modeling rule related behavior, or simply prompting the expected behavior. The next section examined the teacher's use of implementing the unified correction procedures. Did the teacher effectively monitor students' off task behavior? The observer tallied each instance of rule related behavior infractions observed. Then the observer tallied whether the teacher responded to the infraction using the PUBS corrective teaching procedure. Next, the observer rated whether a warm, assertive, and firm voice tone was used during the correction procedure (+=yes; – =no). Data were also collected on whether the teacher stated all six-steps of the unified correction procedure. At the conclusion of the observation period, the data collected were summarized to display totals and percentages of each section. The final quadrant allowed the teachers to receive written feedback concerning their observation.

Although the observation system was designed to reflect key aspects of PUBS, the categories of instructional variables under investigation were general and reflective of fundamentally sound teaching. For example, appropriate voice tone, teacher monitoring, reinforcement, and correction are foundations of good teaching and not restricted in their use to teachers trained only in the use of PUBS. Number of rule violations represents a reasonable record of the behavior climate in any classroom and served as a proxy for office discipline referrals more commonly used in studies of positive behavior support interventions but unavailable for use in the comparison school in this study.

In both the treatment and control schools, the teachers were observed at least twice during the school year. Observers sat in an unobtrusive area of the classroom and collected data for at least 30 minutes at a time. Teachers in both schools were given a carbon copy of the data that had been collected during the observation. Any questions by the teacher concerning the observation were handled immediately following the session or a meeting was scheduled to discuss the results. The reactive nature of the observations was deemed minimal in light of the continuing participation of the treatment group teachers in the project over a period of three years and the periodic observation of control group teachers as part of ongoing district practices.

Design and Analysis

We employed a post-test only experimental design. Reflecting quality indicators for group experimental and quasi-experimental research in special education (cf. Gersten et al., 2004), we completed comparisons in assigned schools for comparable teachers randomly selected to participate in our research analysis. We used descriptive and inferential independent group t-tests to evaluate the statistical significance of observed differences between these groups of teachers for key

classroom instructional variables (e.g., teacher reinforcement, teacher correction, teacher monitoring). To control Type I error rates, the alpha was set at the 0.01 level of significance for all comparisons; and, effect sizes (cf. Cohen, 1968; 1988; Thompson, 2006) were calculated (treatment mean-comparison mean divided by standard deviation of comparison group) as indicators of the practical significance of observed differences.

Results

Consistently high levels of inter-observer agreement (80-95%) were obtained for observations conducted at both participating schools. Means, standard deviations, observed *t*-statistics, and effect sizes for teachers in treatment and control schools are presented in Table 1. Significant differences favoring the teachers using Positive Unified Behavior Support were indicated for all variables except teacher voice tone. Teachers in treatment schools (*M*=18.88) provided reinforcement approximately twice as often as their peers in control schools (*M*=10.17) and they corrected their students (*M*=2.47) less than students in the control classrooms (*M*=7.70). Reinforcement/correction ratios were approximately 4 times higher for teachers using PUBS (*M*=8.91) compared to their peers who were not using systematic behavior support (*M*=1.70) and there were less total rule violations (*M*=2.47) in treatment compared to control schools (*M*=8.76). Teachers in the treatment schools monitored inappropriate behavior more often (*M*=97.05) than their peers in the control schools (*M*=75.88). Although differences were not significant, the teachers in the treatment group (*M*=95.58) used a positive voice tone more often during corrective teaching than the teachers at the control school (*M*=88.00). Effect sizes reflecting practical significance of these findings were all high.

Discussion and Conclusions

Educators face daily and continuous challenges in efforts to establish and maintain safe and orderly classroom environments where teachers can teach and students can learn (Brooks, Schiraldi, and Ziedenberg, 2000; Duchnowski, Kutash, Sheffield, and Vaughn, 2006 and others). Prevention strategies for controlling problem behaviors are preferred to reactive behavior management approaches because of the potential to reduce the development of new (incidence) and current cases (prevalence) of school-related problems. A well-crafted approach to prevention improves the efficiency and effectiveness with which school, classroom, and individual behavior support systems operate (cf. Horner, Sugai, and Vincent, 2004 and others). Some models are difficult to implement and maintain because many students are unresponsive to generalized interventions, have a dominant impact on classroom functioning, respond slowly to even targeted interventions, and often demand intensive, ongoing, individualized behavior support (Sugai, Sprague, Horner, and Walker, 2000). These students are often referred to special education because the instructional ecology in general education often does not support even minor variance in behavior (Safran and Oswald, 2003; Ysseldyke, Algozzine, and Thurlow, 2000).

Within the broad range of systemic and individualized strategies that entail positive behavior support, there are a myriad of possible implementation approaches. This research provides evidence to support the operationally defined and replicable interventions within the PUBS model and evidence on key instructional behaviors associated with those interventions. Our work illustrates the effects of using proactive strategies central to positive behavior support and highlights the differences in instruction that are evident in classrooms using instructional techniques that use and consistently enforce school-wide rules and procedures, reinforce positive behavior and teach alternatives, ensure that all staff members are 'on the same page,' and are relatively easy to implement and monitor. Continuing use of these practices provides a foundation for what needs to be done to correct the low levels of positive instructional approaches evident in many classrooms, even those including students with disabilities (cf. Baker and Zigmond, 1990; Deno, Maruyama, Espin, and Cohen, 1990; Shores, Jack, Gunter, Ellis, DeBriere, and Wehby, 1993; Ysseldyke, Algozzine, and Thurlow, 2000; Ysseldyke, Thurlow, Mecklenburg, and Graden, 1984).

Limitations

Given the preliminary and applied nature of our research, we acknowledge several limitations in our study. First, we focused on a small number of teachers in a single school and generalizations beyond our data must be approached with caution; however, we reasoned that inclusion of data from a comparison school with similar general characteristics was an acceptable 'control' given the introductory nature of our research and other similar work conducted in individual schools (Duchnowski, Kutash, Sheffield, and Vaughn, 2006 ; Warren, Bohanon-Edmondson, and

Table 1: Means, Standard Deviations, Observed t-Statistics, and Effect Sizes for Treatment and Control Schools

		Group			
Variable		Treatment	Control	Observed t	Effect Size
Teacher Reinforcement	*M*	18.88	10.18	3.58*	1.32
	SD	7.54	6.57		
Teacher Correction	*M*	2.47	7.71	-6.08*	-1.57
	SD	1.23	3.33		
Praise-Correction Ratio	*M*	8.91	1.70	5.67*	4.05
	SD	4.93	1.78		
Teacher Monitoring	*M*	97.06	75.88	3.73*	1.06
	SD	12.13	20.02		
Positive Voice Tone	*M*	95.59	88.00	1.78	0.58
	SD	13.22	12.99		
Total Rule Violations	*M*	2.47	8.76	-6.08*	-1.54
	SD	1.23	4.09		

*p<0.01

Turnbull, 2006). Second, our findings do not generalize to middle or high schools and given the continuing interest in positive behavior support with older students (Metzler, Biglan, Rusby, and Sprague, 2001 and othes), future studies should address this limit. Third, while the general levels of implementation among our teachers were acceptably high, we were not able to analyze differences in instruction provided across differing levels of fidelity; addressing this in future studies will extend what is known about the value of positive behavior support programs.

Implications for Future Research

The defined and replicable interventions and instructional behaviors permit measurement of procedural reliability and outcomes associated with the PUBs intervention. As the field of positive behavior support matures, other practical models congruent with positive behavior support principles need to be defined and evidence of effectiveness across dimensions of dependent data, including all areas of academic outcome, are essential. Replication studies, sustainability studies, and comparative studies of the effects of PUBS and other implementation models of positive behavior supports are also needed in middle and high schools to advance the science of positive behavior support. Finally, studies of the effects of these comparative models on behavioral and academic performance are needed to build the research base for positive behavior support and interventions.

Implications for Practice

The findings of this research support what has been known from the behavioral literature for some time. For teachers, you get what you teach. If we want better behavior, we need to teach it, and teach it well. You also get what you reinforce. Catching the student doing it right is still one of the most powerful strategies available to teachers. Misbehavior is an opportunity to teach. When misbehavior happens, respond with instruction through corrective teaching, maintaining emotional poise and control, and without engaging in power struggle. Respond to misbehavior consistently with corrective teaching, so students learn that the correction is intended to help and not to hurt. Finally, for administrators and the total school team, working toward school-wide unified attitudes, common expectations across classrooms and grade levels, and consistency of corrective responses across teachers and across grade levels build more effective schools than individual teachers planning classroom specific behavior plans in isolation.

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