

# *A Case Study of Team-Initiated Problem Solving Addressing Student Behavior in One Elementary School*

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- **Team-Initiated Problem Solving (TIPS) is an approach for organizing school team meetings to improve identification of targeted problems, use of data in the development of solutions, and development of implemented action plans.**
- **TIPS has been demonstrated in single-case and randomized controlled trial studies to improve the effectiveness of teams to both define academic and social problems in their schools, and to build practical solutions.**
- **This case study describes the experience of one elementary school team in their use of the TIPS approach, and the extent to which interventions developed by the team resulted in benefits for students.**
- **The major findings were that not only was the team effective at identifying academic and social problems and building solutions, but clear documentation was provided of improvement in student outcomes. The team used TIPS effectively, and there were measurable benefits for students.**
- **This case study has direct implications for how schools can improve team effectiveness, and the results suggest specific directions for future research focused on how teams can better use data to build action plans that benefit students.**

The National Center for Educational Statistics lists over 90000 public schools in the United States. In each of these schools one or more teams of educators typically meets to address challenges and build solutions that will improve the quality of education in the school. Assuming that each school has at least one team that meets at least monthly during the academic year, and that, on average, there are five people on a team, this translates into a national investment of 810000 hours of meetings and 4050000 hours of personnel time annually. The focus of this paper is on identifying procedures for maximizing the value of this investment.

There is a compelling and consistent set of recommendations for how school teams should solve educational problems (Bransford & Stein, 1984;

Carroll & Johnson, 1990; D'Zurilla, Nezu, & Maydeu-Olivares, 2004; Gilbert, 1978; Huber, 1980; Jorgensen, Scheier, & Fautsko, 1981; Newton, Horner, Algozzine, Todd, & Algozzine, 2009; Tropman, 1996; Ysseldyke & Algozzine, 2006). A key feature of this process is the use of data to identify and solve problems (Alonzo, Ketterlin-Geller, & Tindal, 2007; Deno, 1985, 1989, 2005; White, 1985). Two messages from this literature are (a) the recommended steps for data-based problem solving remain impressively consistent across time, context, and authors, and (b) there is evidence that actual problem-solving practices in schools leave room for improvement (Burns, Peters & Noell, 2008; Sanetti & Kratochwill, 2009). As Tilly (2008) points out, the basic "problem-solving method" is logical, easy to understand, and "something people do every day" (p. 18-19). We

need ways to use this method more consistently in schools.

Team-Initiated Problem Solving (TIPS) is a model developed in 2008–2009 to make basic problem-solving procedures more accessible to school teams (Newton, Horner et al., 2009; Newton, Todd, Algozzine, Horner, & Algozzine, 2009). The TIPS model includes (a) access to useful school data (academic and/or behavioral), (b) a six-hour professional development workshop for the school team, and (c) two post-training “coached” team meetings. The TIPS training involves team orientation to core meeting foundations and problem-solving practices including:

1. The roles, scheduling, and recording format (i.e., foundations) for an effective meeting;
2. The process for defining academic and/or behavior problems with precision;
3. The development of intervention solutions that draw from research-validated strategies, yet are tailored to fit local context and needs; and
4. Implementation, evaluation, and adaption of the action plans.

The full professional development protocol is defined in the TIPS Training Manual (Newton, Todd, Algozzine et al., 2009). The impact of the TIPS training process has been assessed descriptively (Newton, Algozzine, Algozzine, Horner, & Todd, 2011), within a single-case experimental design (Todd et al., 2011), and most recently, in a randomized control trial (Newton, Horner, Algozzine, Todd, & Algozzine, 2012). The consistent findings from these studies were that teams who received training were effective at (a) using data to identify and solve problems, and (b) building practical action plans for implementing their solutions. At this writing, over 160 schools in Oregon and North Carolina have been trained and are implementing TIPS procedures.

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The purpose of the present study was to address the extent to which TIPS procedures lead to valued change in student outcomes. Three descriptive research questions were examined: (a) One year after receiving TIPS training, was the case study school

team still using TIPS procedures with fidelity? (b) Was the team successful in defining and implementing “solutions” to identified problems? and (c) Were the solutions perceived as effective in producing valued change in student behavior?

## Method

We used a case study design following the American Psychological Association designation of “case study” as “reports of case materials obtained while working with an individual, a group, a community, or an organization” (APA, 2011 p. 11), to document critical features of TIPS implementation and use. The school, team, and measures are described in the following sections.

## Participating School

J. M. Elementary School (a pseudonym) is one of 12 schools in a district (nine elementary, two middle, and one high school) in the Pacific Northwest. The district had a leadership team committed to district-wide implementation and evaluation of school-wide positive behavioral interventions and supports (SWPBIS). District-wide support included access to a coach, before, during, and after meetings, and opportunities to attend county and statewide professional development activities.

The school served students in grades K–5, with a total enrollment of 555 students at the time of the study. Ten percent of students were receiving special education support, 3% were English Language Learners, and 89% were from Caucasian families. Eighteen percent of students qualified for free or reduced lunch. SWPBIS had been in place for the past seven years and the level of implementation was high as measured by the School-wide Evaluation Tool (SET: Sugai, Lewis-Palmer, Todd & Horner, 2001; Horner et al., 2004: SET Total scores 2004–05, 89%, 2006–07, 95%, 2007–08, 95%, 2010–11, 99%) and the Benchmarks of Quality (BoQ: Childs, Kincaid & George, 2010: BoQ Total Scores 2007–08, 92%, 2008–09, 95%, 2009–10, 79%). The school had a five-year history of using the School-Wide Information System (SWIS: May, et al., 2010) for entering discipline data. The team had also documented high fidelity in their use of Team Initiated Problem Solving, both one year before the study was conducted and at the time of the study.

No assessment of fidelity was obtained in the intervening interval.

## The Team

The SWPBIS Team for J. M. Elementary had five members, including the principal, instructional assistant, and three teachers (K, third grade, and fourth/fifth grades). The principal had been on the team for 7 years, and other team members averaged team tenure of 3 years (range, 2–5 years). As a function of annual planning, the team had scheduled eight meetings for the school year. The 60-minute meetings occurred the first Thursday of each month in the school library, with Internet access. All team members attended all meetings as indicated in meeting minutes and direct observation (see below). The team had received TIPS Team Training a full calendar year prior to initiation of data collection for this case study. Following their TIPS training the team had documented criterion-level fidelity of TIPS implementation (Newton, Horner et al., 2012).

## Measurement

**Use of TIPS.** To determine if the team was implementing TIPS an external observer used the Direct Observation, Recording, and Analysis (DORA; Newton, Todd, Horner, Algozzine, & Algozzine, 2009; Algozzine, Newton, Horner, Todd, & Algozzine, 2012) fidelity measure during each of four meetings (November, 2010, January, 2011, February, 2011, April, 2011). The DORA produces a "Foundation" score calculated as the percentage of 12 "structural elements" deemed important for conducting effective and efficient meetings (e.g., meeting starts on time; previous meeting minutes are available; agenda is available; team members serve as Facilitator, Minute Taker, and Data Analyst; quantitative data are available for decision making), and a "Thoroughness" of problem solving score, which is calculated as the average of core problem solving elements (e.g., defining problems with precision, collecting and using quantitative data, defining a comprehensive solution, and building an action plan to implement the solution). DORA has been demonstrated to produce both reliable and valid indices of team behavior (Newton, Horner et al., 2011) and the psychometric properties of DORA are available in Algozzine et al. (2012).

**Implementing TIPS Solutions.** To determine if solutions developed from the TIPS process were implemented as proposed, a trained observer used the Plan Implementation Measure (PIM; Newton, Todd, Horner, Algozzine, & Algozzine, 2011) during the April, 2011 meeting. The PIM generates a percentage score based on the elements of action plans for problem solutions developed in the prior meeting that are perceived by the team to be implemented with "good" or "excellent" fidelity. The PIM also produces an "Impact" score based on the number of problems in which the action plan resulted in change in student behavior at a level that met or exceeded the TIPS goal for that problem.

**Narrative.** Given the exploratory nature of the current study, the external observer also collected narrative documentation at each meeting associated with how the team (a) identified and defined problems, (b) built action plans to address these problems, (c) determined if action plans had been implemented, and (d) decided if action plans had produced desired outcomes. These data provided additional support for evidence gathered with other measures.

**Interobserver Agreement.** During the April meeting, DORA and PIM data were collected independently by two observers, and occurrence-only agreement was calculated using item-by-item comparisons as defined for each instrument. Observers were doctoral students or research assistants at the University of Oregon, and had met a  $\geq 85\%$  interobserver agreement (IOA) criterion on both DORA and PIM prior to the onset of the study. The DORA "Foundations" IOA was 100% and the PIM IOA was 98%. To assess the accuracy of narrative information, members of the team reviewed the summaries for the four team meetings and verified that the descriptions of the meeting content and process were accurate. (Note: Copies of DORA, PIM, and related scoring protocols are available from the second author.)

## Results

The focus of this case study was on examining three questions: Was the school using the TIPS procedures with fidelity a year after training? Were the solutions developed through the TIPS process implemented by the school personnel? And if solutions were implemented, was there evidence that students benefited? Outcomes of our analyses are presented in the following sections.

## TIPS Implementation Fidelity

Direct observation of team procedures was collected via DORA at each of the four meetings (November, January, February, and April). DORA Foundation scores assess the extent to which the basic structure of the meetings occurred with predictability, efficiency, and focus. Foundation scores for the four meetings were 92%, 100%, 100%, and 100% respectively. These data indicate high fidelity with meeting foundation procedures. DORA also provides an index of the Thoroughness of the problem-solving process used by teams. A Thoroughness score is generated by assessing how the team defines and addresses each new problem. Four new problems were identified during the observed meetings: Three in the November meeting and one new problem at the January meeting. The meetings in which new problems were identified produced DORA Thoroughness scores of 80% and 83% respectively. Together, the DORA Foundation and Thoroughness data met the 80% fidelity criterion recommended for "criterion level" implementation of the TIPS model (Newton, Todd, Algozzine et al., 2009).

Together the TIPS fidelity data indicate that J. M. Elementary School team members were continuing to use TIPS procedures with high fidelity during the school year. Problems were identified with precision. Data were used to identify problems and build solutions. Solutions were defined within formal action plans, and action plans included formal targets or criteria for success.

## Implementation and Impact of Solutions

Within the TIPS model, a "problem" is defined as a difference between the observed students' academic or social behavior and desired student behavior. A "solution" is an action plan for modifying the learning environment to improve student behavior. The assumption behind holding team meetings is that the collective problem solving done by a group of professionals with a common commitment to student outcomes and detailed knowledge of the school will produce action plans that are efficient, effective, and contextually appropriate (Newton, Horner, et al., 2009). The central assumption within the TIPS model is that helping a team use data to define school problems with precision and build action plans with clarity, will improve the likelihood that action plans will be implemented as expected, and produce practical benefits for students.

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The PIM data collected during the April meeting produced a 98% implementation score, indicating excellent assessment by the team of both action plan fidelity and documentation of student impact for that meeting. To examine if these data accurately reflected the broader operation of the decision-making process, we followed the team during the academic year as they addressed four identified problems. These four were the full set of problems selected by the team for problem solving during team meetings. Problems 1 through 3 were initially identified during the October team meeting (e.g., before the first observed meeting), and Problem 4 was identified during the January meeting. For each problem we present (a) the problem definition, (b) the data used to confirm and refine the problem, (c) the action plan proposed as a solution, (d) the team's assessment of action plan implementation, and (e) the team's perception and supporting data assessing the implementation of the plan on student behavior.

**Problem 1: Fifth Grade Classroom Disruption and Disrespect.** The first problem was identified in October and reviewed at the November meeting: "A large number of fifth graders are engaging in disruption and disrespect (name calling, talking out, pushing and shoving) during class, and the behavior appears to be maintained by peer attention." Minutes from the October meeting indicate that the team data analyst used SWIS to examine problem behavior location, grade, and custom reports. The data indicated that 20 instances of classroom problem behavior had been entered (a rate of 0.60 per school day) from the five classrooms with fourth and fifth graders. The problem behavior was most likely at 9:15, 11:00, 11:30 and 12:45 (times when students were in class). Disruption and disrespect were identified for 11 different students (14% of fifth graders), and 3 of these students accounted for over 40% of the total office discipline referrals for the school during the defined period.

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The solution defined by the team led to an action plan with two elements: (a) reteach the "stop signal routine" used as part of the ongoing bully prevention intervention (cf. Ross & Horner, 2009; Ross, Horner & Stiller, 2008), and (b) goal setting with the fifth grade team to earn predictable social time. The defined goal for this action plan was to reduce fifth grade classroom disruption and disrespect to no more than 0.30 events per school day (a reduction of 50%).

At the second observed meeting (January), the team reviewed the progress around implementation and impact related to Problem One. The data analyst reported that the rate of disruption and disrespect in fifth grade classrooms had not decreased, and in fact had *increased* to 1.26 events per school day. The team facilitator turned the discussion to the question of fidelity with which the proposed solution had been implemented. Team consensus was that the plan developed in November had not been used. The school calendar had not been consistent during the holidays, and efforts to implement a new district math curriculum had led to the erratic use of eight substitute teachers over the prior six weeks. A decision was made to add a faculty "orientation" to the solution elements and plan for more consistent scheduling in fifth grade classrooms. During the next meeting of the team in February, team members reported effective implementation of the faculty orientation, and "good" fidelity of implementation of the proposed solution. The data analyst reported that the rate of fifth grade classroom office discipline referrals had reduced to 0.47 events per school day. The team chose to continue rather than modify their action plan.

At the April team meeting the team facilitator again asked the team to assess if the school personnel were implementing the action plan with fidelity, and the perception of the team was again that implementation was occurring with "good" fidelity. The data analyst reported that office discipline referrals in fifth grade classrooms had decreased to 0.24 events per day. The defined goal had been met, and the fifth grade teachers reported satisfaction (though not delight) with student behavior.

**Problem 2: Student A's Disruptive Behavior.** A second problem defined by the team during the October meeting and evaluated at the November meeting was the high rate of disruptive classroom behavior for Student A. The team data analyst used the SWIS individual student report in October to confirm that Student A had six office discipline referrals over

the prior 16 school days (0.37 ODRs per school day), and his rate of problem behavior was increasing since the start of the school year. The problem definition read, "Student A is engaging in disrespectful and disruptive behavior (talking to peers) in the classroom during an array of activities, but especially during second period, and the staff were not confident in the function maintaining his behavior."

The action plan for Student A's problem had two elements: (a) conduct a functional behavioral assessment to define the maintaining function, and (b) enroll Student A in the Tier II, Check-in/ Check-out (CICO: Crone, Hawken & Horner, 2010) support system already available in the school. The goal for this plan was set at 80% of CICO points, and reduction in rate of ODRs by 50%. The CICO program focuses on developing self-management skills, and teaches students to recruit teacher attention appropriately.

Once again, assessment of fidelity and impact at the January meeting indicated no improvement in Student A's behavior and perceived poor fidelity of CICO implementation attributed in large part to the extensive use of substitute teachers who had not been trained in use of CICO. During the February meeting the team reported that Student A was now actively engaged in CICO, the intervention was perceived to be implemented with fidelity, and his behavior during class had improved (January rate = 0.11 ODRs per school day, February rate indicated 0.05 ODRs per school day). With his increased engagement in academics, however, there was a shift in the focus of his behavior support from reducing disruption to increasing assignment completion. The team chose to modify the action plan to increase the monitoring and reward of assignment completion while retaining the elements of the plan that were perceived as assisting Student A to behave successfully.

The team facilitator revisited these decisions during the April meeting and team assessment was that the action plan was being implemented with "good" fidelity, and that both the rate of disruption and increased level of task completion exhibited by Student A were at acceptable levels (ODR rate of 0.10 per school day for April). Team perception was that rate and intensity of problem behavior had decreased, and likelihood of assignment completion had improved.

**Problem 3: Student B's Disruptive Behavior.** A second student was identified in October as a less

intense behavior support challenge, but someone who was in danger of building emerging problem behavior patterns. The team's data analyst noted that Student B had been referred to the office repeatedly for minor problem behavior most often from classroom activities scheduled just before and just after lunch. There was lack of confidence in the maintaining consequence for his behavior, and either escape from difficult work, or peer attention could be implicated. In addition, consideration was given to medical variables that may have been contributing to his emerging problem behavior.

The team chose to withhold development of a formal behavior support plan pending information from a physician's visit, and ongoing monitoring of his pattern of problem behavior.

At the November team meeting the medical concerns had been addressed, and both team perception and SWIS custom report data indicated that with one exception following winter break, Student B was behaving well. The team chose to have the data analyst continue to monitor Student B's data for the remainder of the year, but his results remained within acceptable levels and did not warrant further team action.

#### **Problem Four: Student C's Physical Aggression.**

During the February team meeting the administrator informed the team that due to concerns raised by his teacher, a behavior support plan for Student C had been developed and implemented outside the team meeting process. The data analyst confirmed that the student had five incidences of minor office discipline referral events, and the team identified the "problem" as: "Student C engages in physical contact, disrespect, and disruption in nonclassroom settings with peers, and the behavior is maintained by peer attention." The defined solution for this problem led to an action plan with three elements: (a) allow Student C to choose a recess partner before going to the playground, (b) a reward program in which Lego time with peers was earned through respectful behavior, and (c) participation in the Check-in/Check-out (CICO) program with a goal of averaging 80% of daily CICO points each week.

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The team facilitator asked for assessment of action plan implementation and effect at the April team meeting. Team members rated the implementation of the action plan as "good" and reported significant satisfaction with the Student C's responsiveness to the support received. Defining, teaching, and acknowledging appropriate behavior was perceived to not only improve Student C's behavior in nonclassroom settings, but also improve the quality of his interaction with peers. Student C ended the academic year with only two additional minor office discipline referrals and achieved the CICO goal (80% of daily CICO points). Minutes from the May team meeting (not observed), however, indicate that during the last month of school Student C's CICO points dipped below the 80% goal level, and a decision was made to extend his support via participation in CICO when he reentered school the following fall.

## **Summary**

Together, the results indicate that the faculty at J. M. Elementary were continuing to use the TIPS process with fidelity. Student problems were being identified, solutions were being developed and implemented, and data were being used to both monitor and adapt action plans.

## **Discussion**

Schools are more than static settings where knowledge is disseminated to ever-engaged learners. Successful schools are continually assessing and adapting to the needs of the specific children in their care. As a field, we have been less diligent than needed in defining the procedures by which educators can efficiently and effectively meet and problem solve. The TIPS model offers integration of procedures long advocated for improving team problem solving (Bransford & Stein, 1984; Deno, 1985; Newton, Todd, Algozzine, et al., 2009; Tilly, 2008). Experimental evidence demonstrates that TIPS training is functionally related to change in how teams collect and use data for decision-making (Newton, Horner, et al., 2012; Todd et al., 2011), but to date there is insufficient evidence that these changes in team problem-solving process result in practical changes in what actually happens during the school day, or improvement in student outcomes.

The present data provide an encouraging view of school-based decision making. The J. M. Elementary team met, used data, made decisions, and documented logical improvement in the quality of behavior support in their school. The case study design prevents any assertion that improved student outcomes were related to team action plans, or that the quality of team action planning/implementation was related to use of TIPS procedures. The collection of external direct observation data and the coupling of the narrative information with DORA, PIM, and SWIS outcomes do, however, lend credence to the assertion that student behavior improved. These results provide valid encouragement to examine the elements of team-based problem solving more carefully. And the team of J. M. Elementary ended the school year with valid cause for satisfaction.

Implications of this study extend to a need for (a) more rigorous and extended analyses of the patterns between team problem solving, school-wide implementation, and student outcomes like those observed at J. M. Elementary; (b) validation of measures of team operation (DORA) and team follow through (PIM); and (c) systematic analysis of the efficiency with which school teams can acquire and use effective problem-solving procedures. Efforts are currently underway to examine the impact of TIPS training on student outcomes within a formal, randomized controlled trial. The methods for trial were informed by the results from the present case study.

Our data also suggest that state, district, and school plans for professional development may be well served to include investment in (a) teaching school teams to use well-documented team problem solving procedures and (b) establishing the data systems that make student academic and behavioral information readily available for decision making at the local school level.

School administrators are encouraged to use these descriptive results to consider (a) the team meeting protocols used in their schools, (b) the quality and specificity of data available to teams, (c) the extent to which teams produce practical action plans to address perceived problems, and most importantly, (d) the extent to which data are used to assess if team-based solutions result in valued benefits for students.

Schooling is an ongoing process of professional improvement. Every school needs to be assessing and

enhancing how well current academic and behavior supports meet the needs of families, students, community, and faculty. Establishing a practical process for team-based problem solving is a key element of this process.

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## References

- Algozzine, B., Newton, J.S., Horner, R., Todd, A.W., & Algozzine, K.M. (2012). Development and technical adequacy of a team decision making assessment tool. *Journal of Psychoeducational Assessment, 30*, 237–249.
- Alonzo, J., Ketterlin-Geller, L.R., & Tindal, G. (2007). Curriculum-based measurement in reading and math: Providing rigorous outcomes to support learning. In L. Florian (Ed.), *The SAGE handbook of special education* (pp. 307–318). Thousand Oaks, CA: Sage.
- American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: American Psychological Association.
- Bransford, J.D., & Stein, B.S. (1984). *The IDEAL problem solver: A guide for improving thinking, learning, and creativity*. New York: W.H. Freeman and Company.
- Burns, M.K., Peters, R., & Noell, G.H. (2008). Using performance feedback to enhance implementation fidelity of the problem-solving team process. *Journal of School Psychology, 46*, 537–550.
- Carroll, J.S., & Johnson, E.J. (1990). *Decision research: A field guide*. Newbury Park, CA: Sage.
- Childs, K.E., Kincaid, D.K., & George, H.P. (2010). A model for statewide evaluation of a universal positive behavior support initiative. *Journal of Positive Behavior Interventions, 12*, 198–210.
- Crone, D., Hawken, L., & Horner, R. (2010). *Responding to problem behavior in schools: The behavior education program* (2nd ed.). The Guilford Practical Intervention in the School Series. New York: Guilford Press.
- Deno, S.L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children, 52*, 219–232.

- Deno, S.L. (1989). Curriculum-based measurement and alternative special education services: A fundamental and direct relationship. In M.R. Shinn (Ed.), *Curriculum-based measurement: Assessing special children* (pp. 1–17). New York: Guilford.
- Deno, S.L. (2005). Problem-solving assessment. In R. Brown-Chidsey (Ed.), *Assessment for intervention: A problem-solving approach* (pp. 10–40). New York: Guilford.
- D’Zurilla, T.J., Nezu, A.M., & Maydeu-Olivares, A. (2004). Social problem solving: Theory and assessment. In E.C. Chang, T.J. D’Zurilla, & L.J. Sanna (Eds.), *Social Problem Solving: Theory, research and training* (pp. 11–27). Washington, DC: American Psychological Association.
- Gilbert, T.F. (1978). *Human competence: Engineering worthy performance*. New York: McGraw-Hill.
- Horner, R.H., Todd, A.W., Lewis-Palmer, T., Irvin, L.K., Sugai, G., & Boland, J.B. (2004). The school-wide evaluation tool (SET): A research instrument for assessing school-wide positive behavior support. *Journal of Positive Behavior Interventions, 6*, 3–12.
- Huber, G.P. (1980). *Managerial decision making*. Glenview, IL: Scott Foresman and Company.
- Jorgensen, J.D., Scheier, I.H., & Fautsko, T.F. (1981). *Solving problems in meetings*. Chicago, IL: Nelson-Hall.
- May, S., Ard, W., Todd, A.W., Horner, R.H., Glasgow, A., Sugai, G., & Sprague, J. (2010). School-wide information system (Version 4.4) [Computer application]. Eugene, OR: University of Oregon, Educational and Community Supports.
- Newton, J.S., Algozzine, R., Algozzine, K., Horner, R., & Todd, A.W. (2011). Building local capacity for training and coaching data-based problem solving with positive behavior intervention and support teams. *Journal of Applied School Psychology, 27*, 228–248.
- Newton, J.S., Horner, R., Algozzine, B., Todd, A.W., & Algozzine, K.M. (2009). Using a problem-solving model to enhance data-based decision making in schools. In W. Sailor, G. Dunlap, G. Sugai, & R. Horner (Eds.), *Handbook of positive behavior support* (pp. 551–580). New York: Springer.
- Newton, J.S., Horner, R., Algozzine, B., Todd, A.W., & Algozzine, K.M. (2012). A randomized wait-list controlled analysis of team-initiated problem solving. *Journal of School Psychology, 50*, 421–441.
- Newton, J.S., Todd, A.W., Algozzine, K.M., Horner, R., & Algozzine, B. (2009). *Team-initiated problem solving training manual*. Eugene, OR: University of Oregon, Educational and Community Supports.
- Newton, J.S., Todd, A.W., Horner, R., Algozzine, B., & Algozzine, K.M. (2009). *Direct observation, recording, and analysis: DORA*. Unpublished instrument. Eugene, OR: University of Oregon, Educational and Community Support.
- Newton, J.S., Todd, A.W., Horner, R., Algozzine, B., & Algozzine, K.M. (2011). *The Plan Implementation Measure (PIM)*. Unpublished manuscript. Eugene, OR: University of Oregon, Educational and Community Supports.
- Ross, S., & Horner, R. (2009). Bully prevention in positive behavior support. *Journal of Applied Behavior Analysis, 42*, 747–759.
- Ross, S., Horner, R., & Stiller, B. (2009). *Bully prevention in Positive Behavior Support*. Curriculum manual developed for intervention implementation. Eugene, OR: University of Oregon, Educational and Community Supports, Retrieved September 3, 2012 from www.pbis.org.
- Sanetti, L., & Kratochwill, T. (2009). Toward developing a science of treatment integrity: Introduction to the special series. *School Psychology Review, 38*, 445–459.
- Sugai, G., Lewis-Palmer, T., Todd, A.W., & Horner, R.H. (2001). *School-wide Evaluation Tool Set (SET)*. Eugene, OR: University of Oregon, Educational and Community Supports.
- Tilly, W.D. (2008). The evolution of school psychology to a science-based practice: Problem solving and the three-tiered model. In J. Grimes, & A. Thomas (Eds.), *Best practices in school psychology V* (pp. 17–36). Bethesda, MD: National Association of School Psychologists.
- Todd, A.W., Horner, R., Newton, J.S., Algozzine, B., Algozzine, K., & Frank, J. (2011). The effects of using team-initiated problem solving on practices of school-wide behavior support teams. *Journal of Applied School Psychology, 27*, 42–59.
- Todd, A.W., Newton, J.S., Horner, R., Algozzine, B., & Algozzine, K.M. (2009). *Direct observation, recording and analysis (DORA) training manual*. Eugene, OR: University of Oregon, Educational and Community Supports.
- Tropman, J.E. (1996). *Making meetings work: Achieving high quality group discussions*. Thousand Oaks, CA: Sage.
- White, O.R. (1985). Decisions, decisions.... *B.C. Journal of Special Education, 9*, 305–320.
- Ysseldyke, J., & Algozzine, B. (2006). *Effective assessment for students with special needs*. Thousand Oaks, CA: Corwin.

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