Best Practices of Effective School-Based

Problem Solving Teams: A Review of Current Literature

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Abstract

School-based problem solving teams have gained in popularity due to their perceived effectiveness in remediating social, behavioral and academic problems that many students encounter.  While the theoretical validity of these teams has been widely accepted, very little research has been conducted to confirm specific best practices of successful teams.  In a review of recently published empirical studies since 1999, several best practices were identified, including strong leadership, data-based decision making practices, and strong feelings of commitment to the process and cultural sensitivity among team members.

School-based problem solving teams [SBPST] go by many names in America's education system: multi-disciplinary team [MDT], instructional support team [IST], and pupil assistance committee [PAC] are but a few of the regional terms used to describe this congregation of professional educators.  Regardless of location, however, the primary purpose of the SBPST remains the same: to provide assistance to students who have demonstrated a need in the areas of academics, social skills, emotional/mental health, or any other arena that affects scholastic achievement and personal well-being.  Each SBPST is staffed, ideally, by school faculty and staff from all aspects of the school environment: guidance counselors, psychologists, teachers, classroom aides, social workers, administrators, and school nurses may all participate in the process.  The guiding philosophy behind such a diverse team indicates that each professional brings to the team differing perspectives and ideas to help students in need.

Students who receive the services of the SBPST are referred to the team leader by school personnel, usually the student's teacher.  The SBPST is also frequently called a pre-referral team, so named because the goal is to aid students who might otherwise be referred for special education services.  The idea is not to deprive students of special services, but rather to remediate issues without special services if possible, thereby alleviating some of the workload of the already-taxed special services staff.

While SBPSTs have been embraced by schools for nearly two decades, little empirical research exists to define why these teams are effective.  The purpose of the current review is to determine current empirically-supported best practices of effective pre-referral intervention teams.

Review of the Literature

Kovaleski (1999) analyzed the effectiveness of Instructional Support Teams [ISTs] in Pennsylvania.  Participating schools were selected from across Pennsylvania's three major geographic regions (midstate, western, and eastern).  Both the year of IST implementation (e.g., 1991-1992, 1992-1993) and level of IST implementation (e.g., low, high, or none) served as independent variables.  Student time-on-task, task completion, and task comprehension measures served as dependent variables.  Pretest, posttest, and follow-up test scores of each individual student observed were charted.  Results indicated that students aided by ISTs with a high level of implementation scored higher in all three areas than did students with low-level or no IST support.  Along those lines, Phase I high-IST groups generally out-performed the Phase II high-IST groups.  Additionally, students with no IST support performed significantly better than students with low-level IST support in all three areas.  This study confirmed the value of the IST, but with the caveat that instructional support must consistently be implemented at a high level to be effective, and that low-level IST implementation can actually harm student performance.  What this study did not address, however, is which specific teaching strategies were utilized in the high-implementation ISTs, and therefore contributed to higher student performance.

Rock and Zigmond (2001) investigated long-term intervention-assisted outcomes resulting from students working with ISTs.  Researchers examined student records two years after their initial referral to the IST to determine what percentages of those students were retained, promoted, and/or ultimately referred to special education. Participants in the study were students in grades K-5 at nine different elementary schools in an urban Pennsylvania school district.  Student referral to the IST acted as the dependent variable in the research; the primary independent variable was the reason for referral and its relation to the outcome of Year 1 vs.

Year 2 IST intervention. Seven research questions guided data collection, an appropriate method considering the ultimate goal was to collect numerical data to describe the status of subjects in terms of outcome variables.

ISTs were ultimately determined to be more detrimental than beneficial, as the process delayed special education services for a majority of students. Students referred to the IST for academic reasons were more than twice as likely to end up in special education than students referred for behavioral challenges. Hence, the reason for IST referral seemed to influence the outcome. Incomplete or missing student records were noted as a limitation of the study, due to the importance of student records. The setting of the study – a large, urban school district – also was noted as a limitation, as the transience of many students' families made it difficult to track them from year to year. Also, this study examined only the number of students receiving IST assistance, and did not take into account the quality of various IST intervention programs.

A study by Knotek (2003) investigated how the context of Multidisciplinary Teams [MDTs] and their social process inhibited their problem-solving capabilities. Two rural elementary schools, one in "town" and the other in the "country" served as the independent variable of the study. Both schools had a predominantly poor, African American population and were ranked as low performing. A micro-ethnographic approach was utilized with four main types of qualitative data collected. Daily field notes that included participant observation, transcription of Student Study Teams [SST] meetings, a collection of documents and interviews served as data sources**.**

Results found that the problem-solving process varied depending on the kind of social interactions in which the teams were engaged. Suggestions made by group members of low hierarchical status (e.g., instructional aides) were ignored, while suggestions made by higher-

ranking members (e.g., principal, counselors) were actively considered. Moreover, the problem solving-process became more subjective and possibly biased when students were identified to have behavioral problems or were from low socio-economic families. Limitations included that only two Student Study Teams were studied and the focus was on only one part of the referral process – the social interactions – rather than the entire process.

Telzrow, McNamara, and Hollinger (2000) explored the fidelity of problem-solving implementation by MDTs during the 1996-1997 school year, and their relationship to student outcomes. The study utilized 227 schools from Ohio with different economic backgrounds. Written documentation of the referral process was reviewed and rated on the review problem-solving checklist. As a dependent variable, scores (e.g., Likert scale, scoring rubric) evaluated the dependability of the problem-solving implementation and student change. Team adherence to standardized problem-solving process served as the independent variable.

Results indicated overall improvement in student outcomes when the MDT model was used. MDTs in the study that demonstrated clear goals and objectives during problem-solving were found to be significant predictors of student's outcomes. However, the fidelity of MDTs fell below desired standards. A limited, but significant correlation was noted between student outcome and implementation fidelity. A limitation was that organizational factors and training of MDTs was not investigated.

<center>Discussion</center>

According to Kovaleski's (1999) research, pre-referral intervention teams are only effective when they are implemented to a high degree. IST support that is implemented to a low degree can actually be detrimental to student performance (as opposed to no IST support at all), so it is paramount that schools that take the team approach to student support do so whole-

heartedly to create a system-wide support base. As with any school-wide plan implementation, strong administrative support is required for success. To this end, Kovaleski (1999) recommends a high level of leadership from the principal or building supervisor. Ideally, this provides the necessary structure and guidance for the actions of the team. Kovaleski (1999) also suggests that decisions with regards to selecting interventions be driven by extensive research and data analysis. Additionally, the student who receives these services should be assigned a support aide or teacher who can fine-tune the interventions to the demands of each individual setting. Kovaleski's (1999) study found that the above factors led to increased time on-task, task completion, and task comprehension, and are recommended as best practices for pre-referral intervention teams.

Telzrow, McNamara, and Hollinger's (2000) research supports that of Kovaleski (1999). Their study of pre-referral teams indicated a significant, but limited, correlation between the likelihood of a positive outcome for a referred student and the level of fidelity to the entire problem-solving process. Clear baseline data, well-defined goals and target dates by which to reach them, empirically-supported interventions, and frequent program evaluation were all identified as essential parts of the problem-solving process. When goals were clear, but no target dates were established, or target behavior was identified without direct baseline measures, Telzrow, McNamara, and Hollinger (2000) found that the fidelity of the process fell below desired standards and student outcomes suffered.

Rock and Zigmond's (2001) research illustrated some less effective practices. In their sample K-5 schools, grade retention was frequently an outcome for students referred to the IST for academic difficulties. Although this is in keeping with the received wisdom of the public education system, Rock and Zigmond (2001) found that over time, these students were more

likely to be retained a grade than their non-referred peers. Also, a significant number of these students were referred for special education services after one year in the IST program. While ISTs can and should decrease the number of inappropriate special education referrals, Rock and Zigmond (2001) found that in these cases, special services were simply delayed, thereby denying the students a full academic year's worth of the support they needed. Rock and Zigmond (2001) support Kovaleski (1999) and Telzrow, McNamara, and Hollinger (2000) in their assertion that program fidelity is of utmost importance, even going so far as to suggest rewards for teachers who implement their given program to a high degree. The larger problem, as Rock and Zigmond (2001) see it, is a lack of appropriate training. They believe that frequent team-building exercises among IST personnel and improved training modules, separately specializing in behavioral interventions and academic interventions, can remediate some of the problems observed in their research.

Along the lines of team-building, Knotek (2003) observed bias in the problem-solving process that affected members and students alike. Observations of IST meetings found that suggestions made by team members with lower hierarchical status (e.g., classroom aides) were roundly ignored, while the ideas of members with greater hierarchical status (e.g., a principal) were entertained, even when they were of poorer quality. Such action disenfranchises specific team members, and makes their presence redundant. Similar bias was noted when discussing students referred to the team: when counselors raised the issue of student SES or other family background, they did not make any connection between that and the educational concern. Knotek (2003) found that the team's problem-solving became much more subjective, rather than data-driven, when students were revealed to come from low-SES families, specific ethnic or racial backgrounds, or were referred due to behavior problems. When the problem-solving

process becomes more reflexive and less reflective, says Knotek (2003), data and research is largely ignored; this flies in the face of best practice, and may also be a contributing factor to the continuing overrepresentation of African-American students in referrals for and placement in special education.

*Limitations of the Research*

Knotek (2003) acknowledges that bias may have several contributing factors, and that his study focuses only on one minute part of the overall referral process: the social aspect of the IST collaboration. Similarly, narrow focus was cited as a limitation of Telzrow, McNamara, and Hollinger's (2000) study; the impact of varying quality of MDT training programs and other organizational factors on maintaining program fidelity was not considered. Rock and Zigmond (2001) acknowledge limitations in their data collecting processes; incomplete student records and significant numbers of transient families made adequate, consistent data collection difficult. Additionally, their strictly quantitative, rather than qualitative, approach may be deemed to narrow to provide accurate results. Kovaleski (1999) identified the need for consistent, high-level program implementation, but did not address which specific successful teaching strategies were employed; such information would be very helpful to schools looking to create or improve their pre-referral teams.

*Direction for Future Research*

The area of pre-referral intervention teams is in great need of empirical study; while anecdotes and well-meaning articles abound, very few formal studies have been conducted in this area since Kovaleski's (1999) program fidelity maintenance study. Perhaps the most necessary research is that supporting specific successful teaching strategies in the IST framework. Based on the findings of Rock and Zigmond (2001), there is also a need to

determine how to best provide IST services while not delaying special education services for those students who genuinely require them.  Pre-referral team training is also an area in need of research; best training practices and how training influences problem-solving process fidelity would be good starts.  Finally, the perennial problem of how to reduce or eliminate bias in the team problem-solving process would be greatly aided by future research.

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Appendix

**Dyad:** <u>Melissa Harper & Damian Bariexca</u>    **Lit. Review Topic:** <u>School-Based Problem Solving Teams</u>

**Specific Question(s) to be Answered:** *What are some best practices of successful school-based problem solving teams?*

| Study | Independent Variable(s) | Sample | Results |
|---|---|---|---|
| **Rock, M., Zigmond, N.** (2001) Intervention Assistance: Is It Substance or Symbolism?<br><br>(longitudinal study) | 1) Year received services (K-5)<br>2) Grade<br>3) Gender<br>4) Race<br>5) Reason for referral<br>6) Reading levels throughout study<br>7) Year 1 IST outcome<br>8) Year 2 IST outcome | • IST referrals constituted substantial number of retained students<br>• Signif. number of students placed in special services after 2nd year of IST<br>• Behavior-based referrals far more likely to remain in gen ed and on grade level after 2 years | • ISTs may not be as effective for students referred due to academic difficulties – causes delay of special services<br>• ISTs who recommend retention **do not** engage in best practice<br>• ISTs are more symbolic than substantive in facilitating educational changes in at-risk, poor performing, or mildly disabled |
| **Kovaleski, J.** (1999) High vs. Low Implementation of Instructional Support Teams: A Case for Maintaining Program Fidelity | 1) Presence of IST in lives of at-risk kids in PA schools<br>2) Level of IST involvement in kids' lives (High/low) | • Task completion/time on task signif. better in hi-IST than lo- and no IST<br>• Comprehension: highest gains in hi-IST, then none, then lo-IST (most significant to learning process as a whole) | • IST programs must be implemented according to critical design<br>• Hi-implementation necessary for success<br>• Strong principal leadership, extensive data-based DM, support teacher to fine-tune interventions |
| **Knotek, S.** (2003) Bias in Problem Solving and the Social Process of Student Study Teams | 1) School setting: rural v. "more rural"<br>2) Predominantly poor, African-American student bodies<br>3) Hierarchical status of team members | • Group members with lower hierarchical status ignored<br>• Counselors led team; provided family background w/o connecting to the educational arena<br>• Problem-solving of team became more subjective when students were revealed to be behavior problems or from low-SES families | • Bias can creep into process when students are from low-SES families or are construed to have behavior problems |
| **Telzrow, C., McNamara, K., Hollinger, C.** (2000) Fidelity of Problem-Solving Implementation and Relationship to Student Performance | 1) Personnel in surveyed buildings<br>2) Personnel training resources<br>3) Adherence of teams to standardized problem-solving process | • MDTs identified target behavior, but w/indirect baseline measures<br>• Goals clear, but no target dates<br>• External factors (e.g. environmental) not discussed<br>• Evidence of treatment integrity absent or vague<br>• Fidelity of implementation of problem-solving process "fell below desired standards"<br>• Significant, but limited, correlation between implementation fidelity and student outcome | • Fidelity to entire problem- solving process must be followed to increase positive outcome of MDT intervention<br>• Further research needed to examine how training and organizational factors influence fidelity of problem-solving implementation, and possible covariates |