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A Mixed Method Approach to Understanding Team Members' Perspectives  
After Receiving Problem-Solving Training and Performance Feedback

Alexander Mark Julian

A dissertation submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy

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## ABSTRACT

### A Mixed Method Approach to Understanding Team Members' Perspectives After Receiving Problem-Solving Training and Performance Feedback

Alexander Mark Julian

Department of Counseling Psychology and Special Education, BYU

Doctor of Philosophy

While countless studies have collected data on the effectiveness of various problem-solving models, few have attempted to identify which components of the training process are helpful to participants. Two teacher teams consisting of seven participants were trained in an adapted version of the Team-initiated Problem Solving (TIPS) model, observed each meeting, and provided performance feedback regarding how well they had adhered to the model. A mixed method approach was used to collect quantitative data in the form of the teams' adherence to the TIPS model and qualitative data once successful adherence to the model had been shown. Researchers interviewed each participant and used some strategies from the critical incident technique (CIT) to identify which components the training and performance feedback process were helpful, unhelpful, and which components they wished had been there that weren't. Themes among incidents reported as helpful were the expectation of meeting in professional learning community (PLC) teams to solve problems and consistent feedback on how closely they were adhering to the model. Unhelpful and wish list incidents included the difficult to use problem-solving form, structural components of meetings and training, and a desire to have more participants in meetings, particularly ones from other grades. Researchers and administrators who are looking to train teams with the TIPS model are recommended to use consistent performance feedback, include participants in the planning of the study, and have more question-and-answer style mini-trainings spaced throughout the observation phase. Lastly, two alternate problem-solving forms are presented as options to be used in place of the current meeting minutes form provided by the TIPS model. Both alternate versions aim to retain the components of the model, but with increased usability.

Keywords: critical incident method, problem solving, qualitative research, systems analysis, mixed method research

## ACKNOWLEDGMENTS

If it takes a village to raise a child, it takes a continent to raise a doctor (of philosophy). Or perhaps it is more a matter of quality over quantity. I could not have asked for a more supportive group of individuals to aid my development as a fledgling psychologist. At the top of the list is my partner, Zoe, who has always been a source of inspiration and motivation. This dissertation is as much hers as it is mine and a testament to her perseverance. Second is Adam. Though he did not possess the capability for long-term memory for most of my degree, his support has been in the form of motivation to provide. He has also served as a biological representation of just how long I have been at this, having been born a few months before the start of my doctoral program.

I would also like to acknowledge my advisor, Ellie Young, for the immeasurable amount of time and energy she has devoted to seeing me succeed, often going above and beyond the call of duty. The countless edits, rereads, meetings, and motivational speeches she provided me gave the structure to continue despite the multiple necessary restructures to the study caused by the pandemic. In the immortal words of Ellie Young, “Let’s get this puppy done.”

Thank you also to Cade Charlton, Christian Sabey, and Beth Cutrer for serving as my committee members. Their expertise and encouragement were essential in crafting my project and helping me to complete a dissertation I am proud of.

Lastly, thank you to the Counseling Psychology and Special Education Department and Ellie Young for the funding necessary to attend trainings, hire a research assistant, and perform nearly all research-related activities.

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## CHAPTER 1

### Introduction

A group of third grade teachers sit in a classroom, pens at the ready. They have just decided that Jimmy's struggle to read at the same skill level as his peers is high on their list of priorities.

"Oh, and don't forget about little Suzy's name calling, it's really becoming problematic," chimes in one of the teachers.

"Yeah, I noticed that too. She said \*\$%# in class today. The other kids thought it was hilarious, and it was kind of funny, but it caused a serious disruption in class."

The team members discuss other student problems until they notice they only have about 10 minutes left to solve the problems they have discussed. They begin brainstorming ways of decreasing these problem behaviors: encouraging Jimmy to read at home and offering alternate words to Suzy to better communicate her emotions. Unfortunately, they don't have enough time to settle on any one solution, nor are they able to assess whether what they planned on doing last week had worked or not. What could be done to help these teachers, whose situation is certainly not unique, use their time more efficiently? How will they know that what they are doing is actually having an effect?

As educators become increasingly overloaded both by the sheer number of students per teacher and by the overwhelming demands on their time, the need for efficient, effective means of gathering, processing, and applying data is becoming all the more important (Crone et al., 2016). One almost ubiquitous method of doing this has been the adoption of team-based educator groups, united in attempting to address student concerns by means of the problem-solving method. Often termed professional learning communities (PLCs; though, as will be discussed,

this term is in no way singular in definition), these teams generally consist of grade level teachers tasked with identifying students who are struggling either behaviorally or academically, creating solutions, and monitoring whether those solutions are having an influence (DuFour, 2004).

The current study aims to provide a steppingstone in the PLC problem-solving literature by identifying the critical incidents in the training and performance feedback process of two teacher teams which have succeeded in implementing the Team-Initiated Problem Solving (TIPS) model. This method of identifying the most helpful and unhelpful components of the TIPS model extends previous research that focuses on the use of problem-solving models (Algozzine et al., 2016; Deno, 2005; Newton et al., 2012; Rosenfield et al., 2018) and helps researchers and educators get a better understanding of participant's experiences with the training and each of its components. This will help administrators and those who train educators to identify what about the TIPS training is most helpful in the training process and what can be cut out or altered. While the TIPS training is effective in improving teams' problem-solving efficiency (Algozzine et al., 2016; Horner et al., 2017; Todd et al., 2012), there is no information from participants on what specifically about the training is working and whether segments can be removed or improved.

Informed by these ideas, the following research questions were addressed:

1. To what extent does training and performance feedback impact PLC team adherence to the TIPS model?
2. Which specific events, procedures, or interactions were helpful to PLC team members in the successful implementation of the TIPS model?

3. Which specific events, procedures, or interactions were unhelpful to PLC team members in the successful implementation of the TIPS model?
4. What additional support, training, or information did PLC team members wish had been available, that was not?

## CHAPTER 2

### Review of Literature

#### Defining Professional Learning Communities

Interest in creating and improving professional learning community (PLC) teams has been accelerated by the call from government agencies to use more data-driven processes in problem-solving efforts. Two of the most impactful of these have been the No Child Left Behind Act (replaced by the Every Student Succeeds Act in 2015) and the Individuals with Disabilities Education Improvement Act, both of which include guidelines regarding the collection and use of data in education settings (Algozzine et al., 2016; Individuals with Disabilities Education Improvement Act, 2004; McIntosh & Goodman, 2016).

In addition to these government guidelines came organizational guidelines for school psychologists. In 2020, the National Association of School Psychologists (NASP) released practice guidelines that strongly encourage school psychologists to use data-driven processes in collaboration with other educators. Furthermore, NASP (2020, para. 2) guidelines suggest that school psychologists should “[use] the problem solving framework as the basis for *all* [emphasis added] professional practices” and should “systematically collect data from multiple sources as a foundation for decision-making.” And, in the wake of these acts and professional guidelines, studies such as ours continue to contribute to these directives with the aim of improving efficiency.

While many of the initiatives created within educational spheres of influence to answer this call for more data-driven methods have come and gone, professional learning communities (PLCs) have been in the educational spotlight for decades and are seen in school systems nationwide. The term *professional learning community* came into being around the year 2000,

stemming from the previously used *collegiality and collaboration* (starting in 1982) and more recently *professional community* in 1995 (Lomos et al., 2011). However, despite being in place for more than two decades, there is no agreed upon definition for what constitutes a PLC and no widely accepted, clear, research-based guidelines about how to conduct PLC meetings (e.g., how much time should be spent identifying problems, designing solutions, and measuring intervention effectiveness; DuFour, 2004; Toole & Louis, 2002).

Kruse et al. (1995) provide one well-accepted (though not ubiquitously accepted) definition of the core components of a professional community (not a professional learning community (PLC); the term PLC was not coined until five years after their review). Kruse and colleagues suggested that although there are varying applications of the concept, the majority contain five key concepts: (a) reflective dialogue, (b) deprivatization of practice, (c) cooperative practices, (d) collective responsibility, and (e) focus on student learning. More recently, Dufour (2004) defined PLCs as having three “Big Ideas” that include the following: (a) ensuring that students learn (instead of just being taught), (b) creating and maintaining a culture of collaboration, and (c) focusing on results. This seminal definition of PLCs seems to be the most widely accepted among the literature (Bolam et al., 2005; Munoz & Branham, 2016; Vescio et al., 2008; Watson, 2014) and as such will be the basis for definition for the current study.

The term PLC is often used to describe grade level teacher meetings but has also referred to many different types of groups: “a school committee, a high school department, an entire school district, a state department of education, a national professional organization, and so on” (DuFour, 2004, p. 1). The lack of a clear definition for what a PLC meeting is has been pointed out by Visscher and Witziers (2004), Beck (1999), Supovitz (2002), Lomos et al. (2011), and Munoz and Branham (2016). The current study refers to PLCs as distinct teacher teams that meet

on a regular basis, rather than the broader, less distinct groups of educators the term occasionally describes. Defining PLCs in this way provides a clear description of the subject of this research (PLC teams) and facilitates attempts to replicate this study.

While more ambiguous definitions, expectations, and ways of working in PLCs give PLCs some flexibility in how meetings are conducted, there is a possibility that the variety of how PLCs function distracts from teams being able to function efficiently. This lack of clear guidelines is likely not causing direct harm to students; however, research has not yet explored how student outcomes may be affected through using a structured problem-solving process that incorporates student data and explicit problem solving during PLC time. The current study attempts to identify what is working well in a Team-Initiated Problem Solving Model (TIPS; Newton, Horner, et al., 2009; Newton, Todd, et al., 2009) training and subsequent performance feedback, and what could be improved. We will now review how PLCs fit into current educational frameworks followed by the research in the three areas listed by DuFour (2004): how the process of teacher collaboration (PLC meetings) has been studied, how these efforts have affected student learning, and finally, how PLC behavior has been recorded by previous researchers.

### **Professional Learning Communities Within a Multi-Tiered System of Support Framework**

Professional learning communities (PLCs) are not, of course, isolated entities within a school system. Rather, PLCs can work within multi-tiered systems of support (MTSS) to identify students who require more intensive interventions. MTSS models use a data-based problem-solving approach to aid individual students and groups of students by providing increasingly intensive instructional support in one of three tiers, according to their needs. Students with intensive individual needs receive Tier 3 support. Students who need Tier 2 interventions usually

receive short-term, small group support, while Tier 1 refers to universal, whole-school strategies to support all students (McIntosh & Goodman, 2016). Within a PLC meeting, educators may discuss whether students are able to participate in interventions within their current tier or, as is often the case, interventions need to be intensified (requiring a student moving to a tier with more intensive instruction) to meet the needs of the student. In sum, MTSS frameworks and PLCs have the common goal to match student needs to instruction using student data, with PLCs being the means by which MTSS ideas can be assessed, put into action, and then evaluated.

While many guidelines and models for intensifying instruction exist (which is needed when it is determined a student should move up a tier), a recent model proposed by Stevenson and Reed (2017) lays out eight components for effectively doing so. The authors break these eight components down into three quantitative factors (adjust the amount of time, reduce the size of instructional groups, and increase the opportunities to respond) and five qualitative ones (optimize the fit between students' needs and the purpose of the intervention, increase motivation to learn, increase feedback, change the method, and consider students' cultural norms and values). These guidelines help educators, including those using the TIPS model within PLC meetings, to create interventions that are specific to the needs of the individual student, that have measurable student outcomes, and can be evaluated to determine if they were successfully implemented, and which provide a concrete basis for future interventions.

This intensifying interventions framework could easily be integrated into the TIPS training and be used to encourage educators to provide specific, clear, measurable goals for student learning as opposed to what simply seems helpful. While educator intuition is extremely useful on a day-to-day basis, simply suggesting an intervention found on Pinterest or Google images does not ensure that the needs of the student are being met. By using the intensifying

intervention guidelines within a problem-solving process, educators are aided in learning to use more specified, measurable interventions and in tracking their effectiveness.

For example, suppose the educators in the case at the beginning of this document want to develop an instructional strategy to help Jimmy achieve grade level reading skills. To aid Jimmy in increasing his reading proficiency, his teacher encouraged him to read at home and anytime he attempts to read in class he is praised for his efforts. Over the last couple of months, little to no improvement is evident and more intensive interventions will be needed to ensure that he is achieving grade level standards. Using what they had learned at their TIPS training, at their next PLC meeting the team members decide to move him from general Tier 1 reading education to more intensive Tier 2 strategies that address a specific skill deficit. Instead of full class reading time, Jimmy will join a smaller, three student reading group twice a week that provides more opportunities for accurately decoding unfamiliar words. The teachers therefore increased the frequency of instruction, reduced the group size, and optimized the fit of the intervention for the student. However, the team's work does not stop there. As will be covered in more detail later, once the intensified intervention has been implemented, without measuring the results of their efforts or the fidelity of implementation, it will be difficult to determine if their efforts are bringing the teachers closer to achieving their goal of bringing Jimmy's reading skills to grade level or if the intervention needs to be scaled back or intensified further.

### **Improving Professional Learning Communities and Teacher Teams**

In addition to attempting to define what a PLC is, with the aid of educators, researchers have attempted to improve the methods and processes of PLC teams. This is usually accomplished by creating or applying a model that describes what should be done within the limited time educators meet within teams, including PLCs. A few examples of such models are

Bransford and Stein's (1993) IDEAL model; Heartland Area Education Agency 11's (2005) Heartland problem-solving approach; Boudett et al.'s (2006) Data-wise Improvement Process; and Tilly's (2008) tiered approach.

While there are many different styles of PLC meeting models, many are action oriented and are therefore composed of some of the basic steps of most problem-solving models: problem identification, problem analysis, action plan/intervention development, implementation, and evaluation (Horner et al., 2017). And, according to the Missoula County Public Schools (n.d.), overlaying these basic components should be four basic PLC related questions:

1. What is it we want our students to know and be able to do?
2. How will we know if each student has learned it?
3. How will we respond when some students do not learn it?
4. How will we extend the learning for students who have demonstrated proficiency?

Can we identify students who have reached identified learning targets to extend their learning?

This framework and some aspects of the Team Initiated Problem Solving (TIPS) components, which are discussed in the next paragraph, have common elements. And, while the PLC questions may be driving teacher behaviors in classrooms, the TIPS process includes some vital elements that are key contributors for meeting efficiency and efforts to improve student outcomes. Because of this, many studies have focused on improving the team itself - and its problem-solving efficiency - with the assumption that improved teams will produce improved student outcomes (Becker et al., 2013; Horner et al., 2017; Lomos et al., 2011; Stormont et al., 2015).

Researchers at the forefront of efforts to improve problem-solving teams include Algozzine B., Horner, Todd, Newton, Cusumano, and Algozzine K., whose model will be described in more detail in the Team-Initiated Problem Solving Model (TIPS) Model section. These researchers have focused on the problem-solving process of school-based teams with the ultimate goal of improving student learning. Horner et al. (2017) suggest that while problem-solving processes are the intended norm in school-based team meetings, how closely teams actually adhere to problem-solving models is “less than encouraging” (p. 2). To address this discrepancy between intentions and practice, Horner and colleagues have not only created a model that clearly lays out the problem-solving steps, but also a form to measure how closely teams are adhering to the model, which will also be covered in more detail in the Decision, Observation, Recording, and Analysis-II (DORA-II) section.

However, where the creators of the TIPS training and the current authors diverge is in the use of the model with PLC teams. By introducing the TIPS model to two elementary school PLC teams, the current study aimed to aid teacher teams in answering the previously noted PLC related questions. And, by combining the culture and aims of PLC teams (collaborative focus on student learning) with the structure of the TIPS training, educators may have both the why and the how to effective problem-solving. This combination has yet to be attempted by researchers and therefore fills a gap in the research literature on the topic.

### **Use of Problem-Solving Processes by Teacher Teams**

In addition to the previously discussed lack of direction in what exactly should happen within PLC meetings, comes a lack of research documenting how problem-solving processes are adhered to by teacher groups (Horner et al., 2017). As Algozzine et al. (2016) recently wrote in an article on problem-solving in teams, “there is an impressive lack of evidence-based research

on the extent to which school teams engage in recommended problem-solving practices and whether those practices are related to positive outcomes for students” (p. 212).

Of the research that has been conducted on the topic of how grade level teams use their team time, it has been found that teams will often spend the majority of their time in meetings on the problem identification phase of the process, leaving little time for identifying goals for change or fully developing and then evaluating evidence-based solutions (Crone et al., 2016; Horner et al., 2017; McDougal et al., 2000; Powers, 2001; Rosenfield et al., 2018; Ruby et al., 2011). In preliminary observation sessions performed by some of the authors of the current study in a mountain west elementary school, about 75% of PLC meeting time was used to identify the problems, with the rest of the time distributed among the remaining problem-solving steps (problem analysis, action plan/intervention development, implementation, and evaluation of previous implementations). While problem identification is undoubtedly an important step in the process, without leaving enough time in meetings for creating intervention plans or assessing whether past efforts have been helpful, PLC teams may miss opportunities to ensure that their efforts are contributing to improved student outcomes and documenting those outcomes with reliable data. In other words, without DuFour’s (2004) third big idea, “focus on results,” a team will not know whether their efforts are actually helping students or if they just seem to be helping.

To be sure, the issue is not that educators do not care about whether their interventions are having a positive impact, but rather they may not have consistent or easily usable frameworks to evaluate the effects of their efforts. That is, they may lack problem-solving frameworks that encourage result tracking. After reviewing the implementation integrity literature, Newton et al. (2012) concluded that researchers are concerned that educators have a “lack of access to

preexisting standardized training, making it necessary for each local school district to develop and deliver its own training for problem-solving teams" (p. 423). This lack of standardization not only leads to confusion about what exactly should be done in PLC meetings, but likely misses potential to help students learn. This then begs the question, "which models are available and how do we know they are effective?"

### **The Team-Initiated Problem Solving Model**

Since the previously explained legislative push, many educators have improved their efforts to collect student data that include the following: office referrals, grades, standardized test results, behavioral screening data, among others (McIntosh & Goodman, 2016). While these kinds of data are, of course, helpful to educators, the sheer amount of data can be overwhelming. Some may ask, "Out of all the data we have collected, what should we focus on?" or "How do we go about using our data to improve student outcomes?" This scenario often leads to what is referred to as a data rich, information poor environment in which educators have gathered large amounts of data but struggle to know how to interpret and use it (DuFour, 2004; Fuchs & Kern, 2014). Having a model to provide a framework for how to interpret and effectively use incoming data can therefore be beneficial to school-based teams.

To address this problem, a variety of models have been proposed and implemented with varying degrees of effectiveness (Horner et al., 2017). An empirically tested, standardized method of problem-solving can provide schools with a means of carrying out all needed dimensions of the problem-solving process including the often-neglected evaluation of intervention implementation (Ruby et al., 2011). However, there is often a lack of strong empirical support that teams are improving in their problem-solving abilities due to the implementation of a certain model (Algozzine et al., 2016; Newton et al., 2012; Todd et al.,

2011; Todd et al., 2012). Among the more recent models proposed is the Team-initiated Problem Solving Model (TIPS; Newton, Horner, et al., 2009; Newton, Todd, et al., 2009; Todd et al., 2011). TIPS has been developed to provide educators with a framework for how to conduct meetings focused on problem-solving, with the ultimate goal of improving student outcomes.

As can be seen from the diagram provided by the creators of the model (see Figure 1), there are six areas that are addressed over the course of TIPS training:

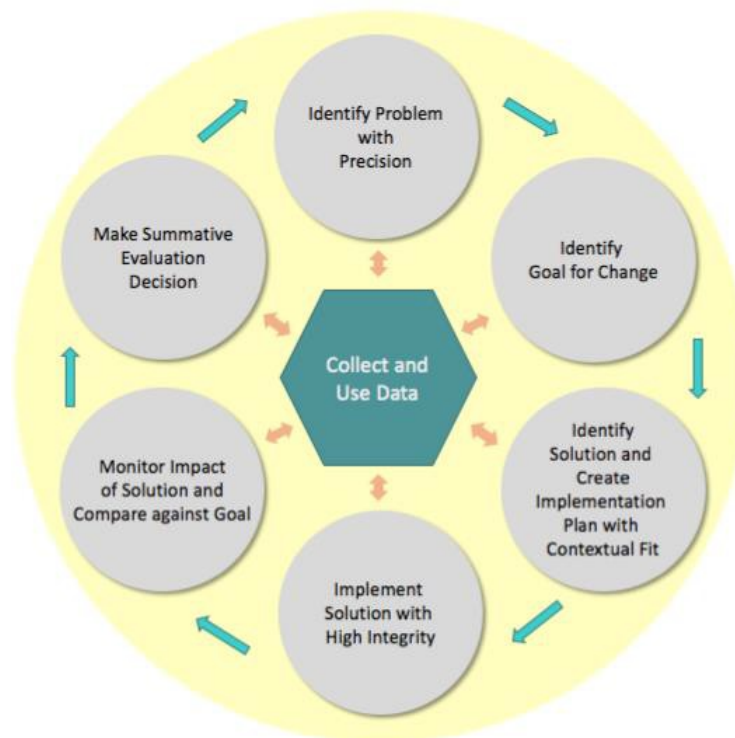
- **identify problem with precision:** The first domain sets the stage for the problem-solving process and asks the clarifying questions of “why,” “who,” “what,” “when,” and “where.” Without a clearly defined idea of what the problem is, a helpful solution will be difficult to conceptualize.
- **identify goal for change:** In this domain of the model, teams define what success will look like in as finite terms as possible. Goals should include detailed definitions of what needs to change and by when. A timeline for which parts of the goal need to be accomplished by when can help keep teams accountable.
- **identify solution and create implementation plan with contextual fit:** A team’s next objective is to work to answer the question, “what are we going to do to bring about the desired change?” Plans for interventions are created during this step, the model providing a framework for helping teams create interventions that are specific to the needs of each student and feasible to accomplish.
- **implement solution with high integrity:** This domain is concerned with whether teams implemented their interventions as planned. As has been described previously, this critical step is often left out as teams move quickly from one problem to the next

without determining whether or not planning from previous meetings was put into action.

- **monitor impact of solution and compare against goal:** During this step, teams ask whether or not an intervention worked as planned. However, if the intervention implementation had low integrity (i.e., was not carried out as planned) then this step cannot fully be addressed. Has the goal been met? Has progress been made or lost?
- **make summative evaluation or decision:** During the final step, teams decide whether a problem is still a problem and thus needs readdressing, or if the problem has been sufficiently addressed. Because the model is cyclical, this step is often a steppingstone for further refining of goals and intervention plans.

**Figure 1**

*The Team-Initiated Problem Solving Model*



## **The Role of External Parties and Performance Feedback**

While not specifically oriented towards implementing the TIPS model, Sperandio and Kong (2018) researched whether PLCs that were aided by researchers in implementing a new program were more effective than those given the program and left to their own devices. They found that external frameworks, such as TIPS, are more easily adopted by PLCs if external agencies (e.g., researchers or district administration) were involved, compared to when teams were simply given the framework and told to do it themselves. One major factor in the positive impact of external agencies is the feedback they give to teams, often referred to as performance feedback.

### ***Performance Feedback Defined***

Performance feedback refers to the practice of providing or receiving information regarding an individual or team's performance in a chosen domain (Solomon et al., 2012). Following calls to use more data-driven processes in school-based interventions, performance feedback quickly rose to prominence as a method of improving teacher behavior (Fallon et al., 2015). More specifically, performance feedback is a commonly used practice when the goal of both consultants (researchers, school/district administration, trainers) and consultees (teachers, PLC teams) is to improve fidelity of intervention implementation (Solomon et al., 2012). In their meta-analysis of 36 studies, Solomon et al. (2012) identified three key features of performance feedback: target behavior, setting, and immediacy. Target behavior includes any measurable teacher behavior such as improving student (individual, group, class) on-task behavior (Myers et al., 2011), peer tutoring, or goal setting (Gilbertson et al., 2007). Setting is fairly straightforward, referring to the effectiveness of performance feedback in different educational settings including grade level (preschool through high school) and special education status (special or general

education; Solomon et al., 2012). The key feature of immediacy refers to the effectiveness of performance feedback given to teachers/teams after varying lengths of time after the participants' behavior.

### ***Effectiveness of Performance Feedback***

Perhaps more important than the question of what exactly performance feedback consists of, is whether it is effective at improving teacher behavior, and more distally, student outcomes. Multiple meta-analyses (e.g., Fallon et al., 2015; Solomon et al., 2012) have been conducted looking at studies containing hundreds of participants, usually teachers. In one such analysis, Solomon et al. (2012) found a weighted average correlation between performance feedback and teacher behavior of  $R = .72$  at a 95% confidence interval, which can be considered a medium effect. Of the 36 total studies included in their review, 16 investigated the impact performance feedback had on student behavior. They found a weighted effect size of  $R = .50$ , which could be considered more moderate. These results provide evidence that performance feedback is an effective way of increasing both desired teacher and student behavior.

In the current study, researchers provided PLC team members with paper copies of their adherence to the TIPS model at the beginning of each meeting (see Appendix A). Using the three key features set out by Solomon et al. (2012) as guides to providing feedback, we can state that the targeted behavior was carrying out the problem-solving process, the setting was a charter K-12 school, and teams were provided feedback one week after their last meeting. While one week is a somewhat long period between performance and feedback, due to the complicated nature of the executed behavior and the time needed for analysis, a week seemed like a reasonable period of time.

## **Decision, Observation, Recording, and Analysis-II**

The Decision, Observation, Recording, and Analysis-II (DORA-II) form (Algozzine et al., 2016) measures the implementation of TIPS training by PLC teams in six domains: (a) Identify problem with precision, (b) Identify goal for change, (c) Identify solution and create implementation plan with contextual fit, (d) Implement solution with high fidelity, (e) Monitor impact of solution and compare against goal, and (f) Make summative evaluation decision. Development of the DORA-II's six measurement domains came from previous work on the problem-solving process completed by Boudett et al. (2006), Bransford and Stein (1993), Deno (2005), Gilbert (1978), and Hamilton et al. (2009).

In addition to process measurement, the DORA-II provides the option to record behavioral information, such as whether the meeting started within 10 minutes of scheduled time, if at least 75% of the team were present, if an agenda was available, and so on. While seemingly minor, this information can help teams determine how effective they are in getting members to meetings and in being efficient with their already limited time.

While initial research has shown promising results from the TIPS training and use of the DORA-II form (Algozzine et al., 2016), adding to this research literature base is a priority due to the amount of time educators spend in PLC meetings. If educators are not effectively using their time in PLC meetings (as measured by the DORA-II) then the possibility exists that PLCs are not an efficient use of educators' already limited time.

## **Critical Incident Technique**

While DORA data were collected for the purposes of providing performance feedback to the teams, qualitative data were the primary form of information used for interpretation of how successful the training and performance feedback were. Since the creation of the critical incident

technique (CIT) by Flanagan in 1954, the method has been used in several fields including communications, industrial/organizational psychology, nursing, job analysis, education, marketing, medicine, social work, and others (Butterfield et al., 2005). CIT seeks to identify the most crucial events in a process through the use of individual or group interviews, surveys, or observation. Because of the wide range of applications, CIT has not had a consistent set of defining features, but Flanagan (1954) attempted to rectify this by recommending five considerations for those using CIT: (a) ascertaining the general aims of the activity being studied; (b) making plans and setting specifications; (c) collecting the data; (d) analyzing the data; and (e) interpreting the data and reporting the results.

There is precedent for the use of CIT within the educational system (Andreou et al., 2015; Charlton et al., 2018; McIntosh & Goodman, 2016). These studies investigated the critical incidents needed for effective sustaining of Tier 1 systems with School-Wide Positive Behavioral Interventions and Supports (SWPBIS; Andreou et al., 2015), for scaling up an integrated MTSS approach (Charlton et al., 2018), and an examination of the critical events in the support of SWPBIS by principals (McIntosh & Goodman, 2016). Using the methods described by Butterfield et al. (2005), these researchers engaged both educators and administrators in structured interviews to identify what they perceived as the most and least important events in their school-wide initiatives, as well as what they wished would have been included. Each study found useful information that can inform administrators, researchers, state officials, and educators as to how to best implement SWPBIS and MTSS in schools. For example, in their study with MTSS project leaders, Charlton et al. (2018) found the most helpful critical components of state-wide MTSS implementation were cross-disciplinary leadership, access to professional development, and consistent language and practices. The most frequently reported

critical hindering events included competing priorities, ineffective professional development models, and the hiring, retention, and turnover of district/school personnel. Participants prioritized the need for more and better trained personnel and that MTSS practices were better defined and implemented.

## **Summary**

In response to legislation encouraging the more intentional use of data in the problem-solving process, educators have turned to team-based collaboration (Algozzine et al., 2016). At the forefront of this effort are professional learning communities (PLC), defined as grade level teacher teams in the current study. Integral to larger multi-tiered systems of support (MTSS), regularly held PLC meetings can aid educators in creating, implementing, and evaluating interventions aimed at improving student learning. The Team Initiated Problem Solving (TIPS) model is a recently developed, empirically validated model that provides a structure for problem-solving teams to work through the six stages of the problem-solving process, as defined by the model: (a) Identify Problem with Precision; (b) Identify Goal for Change; (c) Identify Solution and Create Implementation Plan with Contextual Fit; (d) Implement Solution with High Integrity; (e) Monitor Impact of Solution and Compare against Goal; (f) Make Summative Evaluation or Decision (Newton, Horner, et al., 2009; Newton, Todd, et al., 2009). In combination with the TIPS model, the Decision, Observation, Recording, and Analysis-II (DORA-II) form enables external observers to record team problem-solving behavior to provide more effective feedback (Algozzine et al., 2016).

While previous research has focused on improving student outcomes through the introduction of a new problem-solving model specifically to PLC teams, the number of studies to do so is very limited (Burns et al., 2008). The current study adds to this limited research pool by

providing an in depth look at the training and performance feedback process from the perspective of the participants. This information is useful because it improves researchers' and practitioners' ability to create or augment training and feedback to better meet the needs of the PLC members who will be using it. This participant-influenced creation process helps to reduce the disconnect between academia and practice and increase participant buy-in.

The following research questions are therefore asked to address these deficits in the research literature:

1. To what extent does training and performance feedback impact PLC team adherence to the TIPS model?
2. Which specific events, procedures, or interactions were helpful to PLC team members in the successful implementation of the TIPS model?
3. Which specific events, procedures, or interactions were unhelpful to PLC team members in the successful implementation of the TIPS model?
4. What additional support, training, or information did PLC team members wish had been available, that was not?

## CHAPTER 3

### **Method**

The current study included elements from several similar peer reviewed studies using the critical incident technique (CIT) as well as a few modifications that introduced benefits and potential limitations. The general design of the study and how it compares to its predecessors will be described first, followed by the participants included in the study and a deidentified description of the setting. Next, the procedures used to train the teams, provide performance feedback, and gather both behavioral and CIT data will be described. Following this is a description of the two instruments used in the data collection process will be given. Finally, we will describe the process of analyzing and checking the data gathered from the CIT interviews.

### **Design**

This study utilized a mixed method approach to measure two PLC teams' use of the Team-Initiated Problem Solving (TIPS) model and then identify the critical elements of the process using the Critical Incident Technique (CIT). The Decision, Observation, Recording, and Analysis-II (DORA-II) form was used to measure team adherence to the TIPS model and to provide evidence that the teams had successfully implemented the model. While we were not able to collect pre and posttest data using the DORA-II due to implications of the current pandemic, we were able to show the teams' improvement in implementing the TIPS model over time. Once both teams had shown proficient use of the TIPS model, as measured by the DORA-II, CIT interviews were used to identify which elements of the training and performance feedback process the TIPS-proficient teams found helpful, unhelpful, and which items they wished had been included that were not. DORA-II data was also collected to provide both teams with accurate and specific performance feedback about their adherence to TIPS.

The CIT was chosen for this study because it enables researchers to identify specific events that contribute to a successful process, in this case the successful adoption and use of the TIPS model. The technique was adapted for the current study so that the effects of a specific intervention could be assessed. The current study differs from similar CIT studies in that researchers are usually not involved in the administration of the change taking place. For instance, in traditional CIT studies, participants would be asked to remember what happened during a specific period regarding the implementation of a program or other change to a system not carried out by the researchers (Flanagan, 1954). Examples of this include researchers asking employees, students, educators, or other participants to recount experiences weeks or months in the past (Graybill et al., 2017; Rademacher et al., 2010; Charlton et al., 2018). These long gaps between events and participant recall are problematic because they increase self-report errors.

The current study's adapted CIT therefore presented both benefits over traditional methods and potential limitations. The largest methodological and practical benefit was that participant interviews were conducted almost immediately after the last week's performance feedback had been provided to PLC teams, reducing participant errors in recalling memories. However, due to the structure of the study, there were increased chances that bias would be added because researchers conducted the training and the interviews. A few precautions were taken to account for this: before each interview was conducted researchers again explained that all information conveyed by participants would be held confidential, and it was also explained that there would be no evaluation of participant performance as a result of their responses to the interview questions.

## **Participants and Setting**

Participants were six licensed teachers and one instructional coach from two PLC teams in a charter school in the intermountain west region. The two teams consisted of three teachers each, with the instructional coach attending both team meetings. Each team consisted of grade level teachers for first and third grade. All participants identified as female. Six of the seven participants identified as White, while one identified as Asian. The teams met regularly (once every two to three weeks) to use data in planning for the behavioral and academic progress of their students. Meetings lasted about 45 minutes and contained all members of both teams for most meetings. There were five meetings in total, excluding the training meeting.

Researchers have worked with the school's principal on previous projects, which prompted the selection of the school for collaboration in the current study. The principal of the school sent teachers a recruitment email that was provided by the researchers and that followed Institutional Review Board (IRB) requirements. This introductory email asked for participants' voluntary participation and explained the purpose, benefits, and risks of the project. In addition to school and district support, IRB approval was gained (see Appendix B), and all participants signed informed consent forms (Appendix C) before the study began. No incentives were offered to team members or district/school administration for their participation in the study.

## **Procedures**

Procedures for this study included the training of two professional learning community (PLC) teams in the Team-Initiated Problem Solving (TIPS) model, assessment of how much of the training participants retained, observation of PLC team meetings, and providing the teams with feedback on their adherence to the TIPS model.

## ***Training***

The two PLC teams which participated in the study were trained using the TIPS procedures. TIPS training focuses on helping school-based teams improve their use of the problem-solving process. Training included reviewing the TIPS model (see Figure 1), providing modeling of how to implement TIPS, and providing feedback as the team implemented TIPS in response to case examples.

One training session was conducted with all participants of the study. This condensed version of the TIPS training was used to better fit into the schedule of the teacher participants. Similar to studies conducted by the creators of the model (Horner et al., 2017), TIPS training was delivered in a semi-structured manner. While the trainer was not guided as to every word to say during the training, there were certain critical topics that were covered in the training session along with the use of identical training materials. For example, each of the six TIPS domains were presented in order during the training, but the trainer was not given exactly what to say regarding those domains during this presentation. Clear behavioral objectives were identified for the training, and teacher participants were asked to complete a short, written assessment of their understanding and application of the training content.

TIPS training also followed the High Quality Professional Development checklist for professional development as outlined by Desimone and Pak (2017). The five key features of the checklist include content focus, active learning, duration, collective participation, and coherence. As applied to the current study, TIPS trainers discussed content areas (language arts, mathematics, behavior) during trainings, invited PLC members to participate in role-plays, provided a sustained duration of training (in the form of weekly performance feedback; Barton et

al., 2018; Fallon et al., 2015), provided opportunities for teachers to learn from each other, and helped teachers to use already scheduled PLC time to carry out more efficient problem-solving.

As part of the “duration” key feature, ongoing performance feedback was given to both teams on a weekly basis at the beginning of each PLC meeting. This took the form of performance reports (hard copy) with information on how much of the TIPS domains were covered during each meeting, sections of the model that the teams missed, and recommendations on how to better address those omissions. Researchers also answered questions regarding the TIPS process and its execution. This is one of the unique pieces of the study in that participants were given more guidance from researchers than is usually provided after the initial training, as seen in most studies utilizing the TIPS model. Namely, ongoing guidance took the form of performance feedback and an invitation to ask questions to researchers about the model.

For purposes of baseline replication, it should be noted that two of the team members have received TIPS training in the past, but not from the current researchers. They have, therefore, been exposed to the ideas in the model. This can be seen as beneficial in that the teams likely had an increased comprehension of the model and therefore provided more detailed data about what was helpful in learning and implementing the TIPS problem-solving model and in receiving weekly performance feedback.

### ***Assessment of TIPS Training Comprehension***

After PLC team members were trained on the TIPS model, each participant was assessed on how well they understood the training. Appendix D contains the instrument used to assess participants’ understanding of the TIPS model. This assessment was used so that results found from the CIT analysis could be compared to how well participants understood and were able to implement the TIPS model. This information could then be compared to the feedback learned

from the CIT interviews. For instance, if participants who retained little about TIPS during the training report that they would make no significant changes to the training and performance feedback process, then it would beg the question, “what needs to change to make this process more effective?” On the other hand, it may be that more information can be learned from participants who struggled to adhere to the model and why that may have been, than from those who did well.

### ***Observation***

After both of the PLC teams were trained on the TIPS model, researchers observed team proceedings without interfering. In addition to an observer being present in meetings, each meeting was recorded with audio/video equipment (iPad). Researchers used the DORA-II form to measure the groups’ adherence to the TIPS model.

### ***Performance Feedback***

The teams also received weekly performance feedback (see Appendix A) regarding their adherence to the TIPS model. Feedback forms reported percentages of adherence to each TIPS domain along with written descriptions of which portion of each domain was missed. In addition to descriptions of missed segments, other elements of the performance feedback forms included encouragement, recommendations, and examples. Participants were also extended an open invitation to contact researchers with any questions regarding the use of the TIPS model or to ask them in person at the end of meetings. Performance feedback was given to each team at the beginning of the meeting the week after the observed meeting.

### **Measurement**

In order to provide accurate and helpful performance feedback to the two PLC teams included in the study, teams were observed, and their problem-solving behavior was recorded

using the Decision, Observation, Recording, and Analysis-II (DORA-II) Form. After the PLC teams' five problem-solving meetings were completed and successful implementation of the TIPS model had been shown, researchers conducted critical incident interviews with each participant as described below.

### ***The Decision, Observation, Recording, and Analysis-II (DORA-II) Form***

The Decision, Observation, Recording, and Analysis-II (DORA-II) form (Algozzine et al., 2016) was used to record the meeting foundations and problem-solving behavior of the PLC teams. This data was then used to provide the PLC teams with specific performance feedback and to ensure that the teams had successfully adopted the TIPS model. The form follows the TIPS training dimensions closely and has been shown to adequately measure the degree to which PLC teams are implementing the principles and techniques learned at training (Algozzine et al., 2016). The DORA-II measures two components of meetings: the meeting foundations and the team's problem-solving processes. Meeting foundations measure behavior such as whether the meeting started within 10 minutes of the start time, if at least 75% of team members were present, or if there was an agenda available, whereas measurements of team problem-solving behavior used the steps found in the TIPS model (see Figure 1).

Observers checked boxes when certain actions took place concerning problems discussed by each team. Each problem presented in PLC meetings was given a separate DORA-II form. Observers often switched between forms as problems were fluidly talked about during a meeting. In addition to check boxes, the DORA-II also provided sections of the form for qualitative responses, though this information was not used in any TIPS-provided data analyses. Researchers can use qualitative analysis on these long response sections if so desired.

The first author and one research assistant served as observers. Observers received training from an experienced researcher who has used the DORA-II in peer reviewed research, practiced using case examples (videos) provided by the creators of the TIPS model and DORA-II form, and reached 91% interrater reliability before coding the meetings included in this research.

### ***Critical Incident Technique Interviews***

After observation data collection had ceased, each participant was interviewed by a researcher. The interview contained four questions that assessed what the participants perceived were the most and least helpful features of the training and subsequent performance feedback, along with anything they wished had been included:

1. What was your experience with the training and performance feedback process?
2. Which specific events, procedures, or interactions were helpful to you and your team in the successful implementation of the TIPS model?
3. Which specific events, procedures, or interactions were unhelpful to you and your team in the successful implementation of the TIPS model?
4. What additional support, training, or information did you wish had been available, that was not?

Questions two and three were alternated from one participant to the next to reduce order effects (Salkind, 2010). In addition to the questions listed above, basic probing was used to get increased detail regarding listed critical incidents. Interviews were conducted over Zoom video conferencing due to COVID restrictions and because the platform ensures easy recording.

Interviews lasted between 9 and 32 minutes, with the brevity of the 9-minute interview being due to the interviewee's child needing attention. The rest of this interview was conducted via email correspondence. CIT interviews were conducted from two weeks and two months after the last

PLC team meeting, with all but one occurring within one month of the last meeting. Interviews were recorded then transcribed. Recordings and transcriptions were kept in a secure Box folder while being analyzed. Interview questions were developed based on previous CIT studies based in education settings (Andreou et al., 2015; Charlton et al., 2018; McIntosh & Goodman, 2016) and in consideration of the recommendations outlined by experts in the field (Flanagan, 1954; Butterfield et al., 2005).

### **Data Analysis**

Similar to the processes carried out by Charlton et al. (2018) and McIntosh and Goodman (2016), after interviews were conducted, recorded, and transcribed, three transcriptions were chosen at random. Helpful, unhelpful and wish list critical incidents were then extracted by the first author and a research assistant. Both researchers then created categories based on themes found from the participants' comments by summing critical incidents and identifying “persistent ideas” (Creswell, 2009). Once researchers came to a consensus about which categories should be included in coding these initial responses, each researcher then used these categories to code for the rest of the responses. Researchers came together on a weekly basis to compare critical incident themes and create/revise categories when necessary (Butterfield et al., 2005). As is typical for CIT research studies, any category that had three or fewer identified critical incidents was eliminated or merged with another category (Creswell, 2009; Kain, 2004).

### ***Critical Incident Extraction Check***

Like the methodology of experts in the field of CIT (Andreou et al., 2015; Charlton et al., 2018; McIntosh & Goodman, 2016), in order to ensure the credible extraction and categorization of critical incidents (CIs) and wish list items, a number of checks were made. The initial check in analysis to ensure trustworthy results was a check of critical incidents extracted

from transcribed interviews (Charlton et al., 2018; Kain, 2004). A member of the research team who had no contact with any of the data (transcriptions, extracted critical incidents, or categories) reviewed a random sample of 25% of the transcribed interviews and extracted critical incidents as they saw fit. Inter-coder agreement was calculated by comparing the initial CIs to the extracted CIs, and any discrepancies were discussed with the whole team. No significant changes were made due to this check.

### ***Category Check***

In addition to critical incident and wish list item extraction, categories were also checked by a third party. This third party was a member of the research team who had not helped in collecting, transcribing, or coding any of the information thus far. After transcribed responses were analyzed and categories were created, another randomly selected set of 25% of the identified critical incidents and wish list items were sent to this third party. Using the inclusion and exclusion criteria for each category, this person placed extracted critical incidents and wish list items into each category. No significant category changes were made and minor disagreements in placement were discussed by the research team, including the individual performing the check, until a consensus was found.

### ***Participant Check***

Once all data were analyzed and checks had been done on critical incident extraction and placement in categories, a final check was conducted to ensure the results of the study were consistent with participant's experiences (Charlton et al., 2018). Participants were given a short questionnaire (see Appendix E) to assess if any critical incidents or wish list items were missed during the extraction process or if categories needed to be altered, added, or removed. Three of the seven participants (the instructional coach, one first grade teacher, and one third grade

teacher) answered this survey, all responding that the themes found and critical incidents extracted matched their experience. As a result, no significant changes were made to the categorizing or presentation of the data.

## CHAPTER 4

### Results

A mixed method approach was used to collect data in answering the following research questions:

1. To what extent does training and performance feedback impact PLC team adherence to the TIPS model?
2. Which specific events, procedures, or interactions were helpful to PLC team members in the successful implementation of the TIPS model?
3. Which specific events, procedures, or interactions were unhelpful to PLC team members in the successful implementation of the TIPS model?
4. What additional support, training, or information did PLC team members wish had been available, that was not?

#### **Team-Initiated Problem Solving Training Comprehension Assessment Results**

The TIPS comprehension assessment (see Appendix D) was immediately administered to PLC team members after their initial one and a half hour TIPS training. Results showed that overall, participants comprehended much of the TIPS training. Six participants (all teachers) took the assessment. Two of the first-grade teachers and two of the third-grade teachers received five out of five marks on the assessment and one participant from each grade received three out of five. In both cases where questions were answered incorrectly, the questions had to do with defining fidelity data, something which we will see was confusing for many of the participants. Overall, the results of this assessment show that PLC team members understood the core components of the TIPS model. These results provide further evidence that these teams were

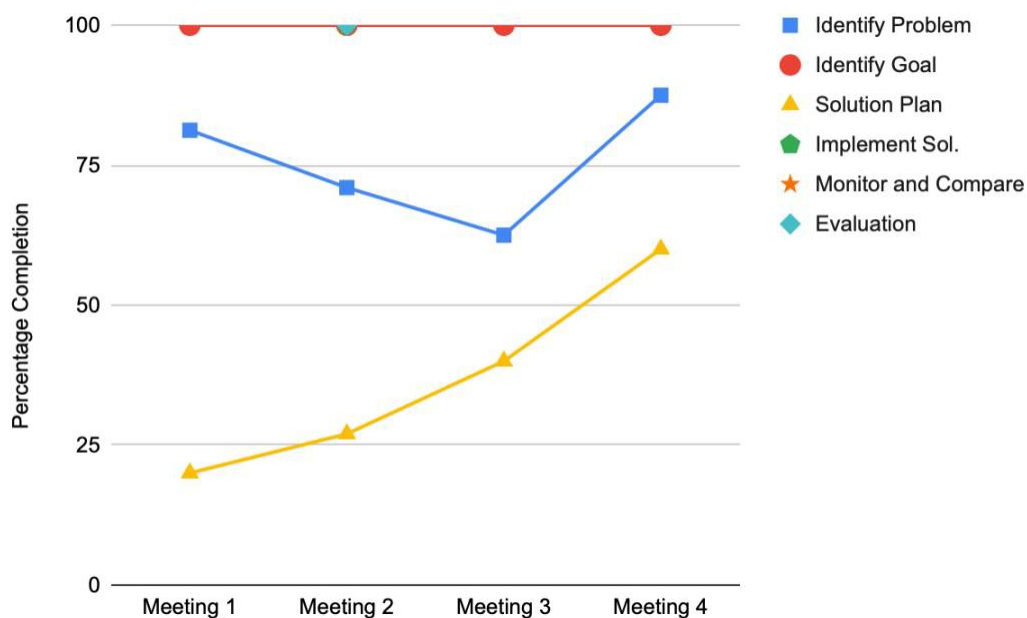
proficient in the understanding as use of the TIPS model and therefore good candidates for a CIT analysis on what helped or hindered the training and performance feedback process.

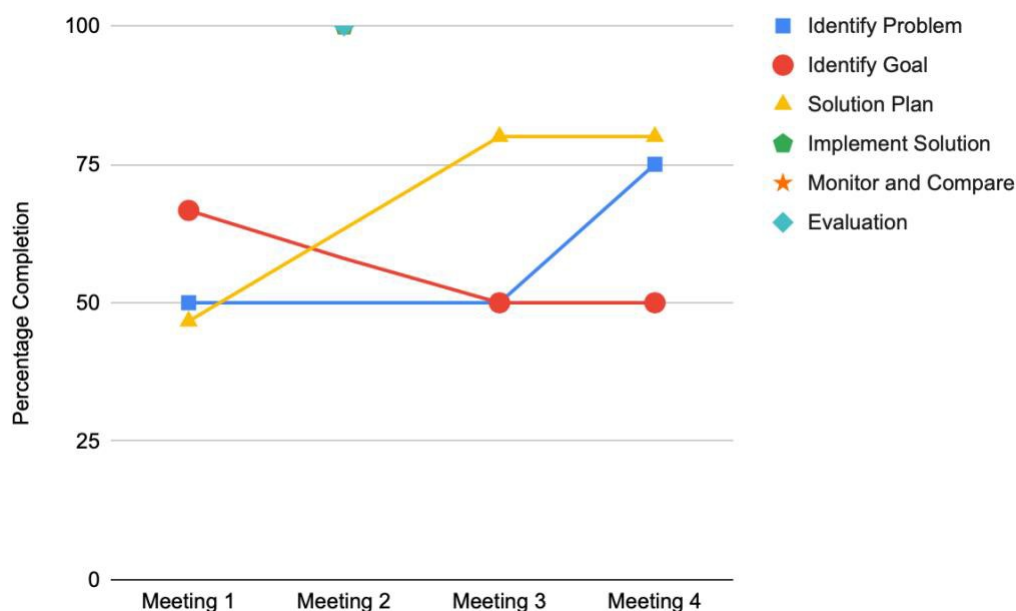
### Team Adherence to the Team-Initiated Problem Solving Model

Quantitative data was collected in the form of Decision, Observation, Recording, and Analysis-II (DORA-II) results. Both PLC teams were observed and recorded, and all problem-solving behavior was coded using the DORA-II form. These DORA-II data were then presented to each team in the form of performance feedback at the start of the subsequent meeting. DORA-II results were also collected to provide evidence that the teams were proficient in implementing the TIPS model and therefore appropriate subjects for a CIT analysis of what they found helpful or unhelpful in their training. Figures 2 and 3 show the DORA-II results for both PLC teams over the four observation sessions.

**Figure 2**

*First-Grade DORA-II Results*



**Figure 3***Third-Grade DORA-II Results*

The descriptive data represented in these figures communicate an increased adherence to TIPS as measured by the DORA-II over time and after performance feedback was given in each category for both teams, except for the 3rd grade team's ability to identify goals. Specifically, the 3rd grade team struggled to create a timeline for when each goal should be completed by. Additionally, while progress was made by both teams in the solution implementation and plan creation category of the TIPS model, the percentage of elements completed in this step in the model was particularly low for the 1st grade team. This step in the model helps teams create a method of tracking implementation fidelity, or how they plan on tracking whether a plan was implemented well.

The sparse results for the second half of the model (solution implementation, monitor and compare, and evaluation), pertaining to following up with previously identified problems, were

mostly due to the teams' decision to focus on the needs of students in a single teacher's class during each meeting. This meant that instead of following up on how well goals had been implemented by each teacher, the PLC team used meeting time to create a new goal for another teacher's class.

### **Helpful Critical Incidents in the Training and Performance Feedback Process**

Two distinct helpful critical incident categories were evident in the interview data: (a) the expectation of meeting in PLC teams to solve problems and (b) consistent performance feedback.

#### ***The Expectation of Problem-Solving***

One theme that emerged was the idea that engaging in the TIPS model created a positive expectation to problem-solve and remain accountable for goals set in PLC meetings. All five of the participants with whom interviews were conducted talked about these expectations for problem-solving in a positive light. Two of these participants were from the first-grade team, two were from the third-grade team, and the instructional coach.

One result regarding expectations for problem-solving within a historic context is that due to the shutdowns and results of quarantine, many educators' regular routines and school procedures were disrupted. The instructional coach identified a "return to form" that the TIPS model brought post-shutdown:

So, I think this was a good reminder of all those pieces that we were supposed to keep doing. But I also think this was really great for this year because with everything going on with COVID and all the extra responsibilities we kind of let the whole meeting cycle in general stop and so it was good to kind of pick that up again and keep it going. So, I really appreciated it.

The instructional coach also explained the overwhelming nature of a COVID affected world by saying, “I think it was the unique circumstance of this year and the overwhelming and just like ‘okay now I have to fill out this form I’m just going to do this really quick.’”

While returning to standardized problem-solving practices that have fallen out of use is likely a critical incident of any study introducing a problem-solving model, it seems the added effect of COVID-related shutdowns increased the usefulness of the TIPS training and performance feedback process. While they didn’t mention COVID specifically, one of the third-grade teachers spoke to the idea that TIPS provided an added level of accountability, “I think what was helpful with this TIPS model [...] was that I was really held accountable to implement the specific action I indicated I would do.” The other third-grade teacher shared something similar, “I think overall the bottom line was you forced us to participate in the meetings and that was helpful.” A first-grade PLC member’s comments highlight the hectic aftermath of shutdowns, as many of the problem-solving efforts of teachers moved to informal methods such as chatting in the halls or during lunch time, “[It was nice] being able to have a set time to be able to sit down and actually talk about [data] specifically.”

### ***Utility of Performance Feedback***

All five of the participants also shared that not only were the required, regular meetings helpful, but having specific, consistent performance feedback was beneficial to the effectiveness of the meetings. As one of the first-grade teachers said, “It was nice to see every week our performance of what we needed to work on for the next time. And it was helpful to get the tips of what we can do better next time.” The instructional coach shared, “I love that you guys gave us so much direct feedback. I think that was invaluable because when else do you have someone watching all your meetings and critiquing them. I think it was really helpful.” By giving heed to

the performance feedback provided for each meeting, teachers were able to see in which areas they improved and where they could still improve. As can be seen from Figures 2 and 3, both team's problem-solving performance improved in all domains of the TIPS model, except for a slight decrease in the 3rd grade team's goal identification. According to the PLC team members, at least part of the success seen from teams was due to the performance feedback they received.

### **Unhelpful Critical Incidents in the Training and Performance Feedback Process**

Unlike in strictly quantitative studies that look for improvement in as many areas as possible, all information is potentially useful in a qualitative study such as the current one. With that in mind, we can view the fact that most of the critical events identified by participants were seen as unhelpful as a positive. This information is invaluable for the augmentation of existing models or the creation of new ones because it points to what can be improved instead of simply confirming what is already working. With this in mind, we now look to the critical events that participants found unhelpful: (a) the meeting minutes form and (b) the structure of meetings.

#### ***Meeting Minute Form***

This category captures responses that refer to the 'Meeting Minutes' form used by participants to create and track goals (see Appendix F). Three of the five participants with whom interviews were conducted mentioned the Meeting Minutes form in some way. Respondents included one first-grade teacher, one third-grade teacher, and the instructional coach. Responses regarding the meeting minutes form were exclusively related to the unhelpfulness of the form or what the participant would have liked to have been different. Responses centered on the overly complicated nature of the form, difficulty in remembering each component in between meetings, and a mismatch between the form and the needs of the teacher teams.

Regarding the complicated nature of the form, the first-grade teacher stated, “I think it was probably overwhelming with the amount of stuff that was on each paper, so just simplifying that would just make it so that it wasn’t as overwhelming.” This same participant explained that because they serve a unique student population, the form may not adequately reflect progress made by students. For example, one student who this teacher has followed up through the grades has not made much reading progress for three years; progress may be simply not falling behind and is more contextual.

### ***Meeting Structure***

All five of the study’s participants that were interviewed mentioned critical events having to do with how meetings were structured. Similar to the previous section, items regarding meeting structure were almost all in response to the questions about what was unhelpful or wish list items. Overwhelmingly, the participants expressed a desire to have more frequent meetings, instead of the once every two-week schedule they had. One first-grade teacher said, “In a typical year, it probably [would have been helpful] if we did something every single week and were all able to discuss every week our things from that week.” This PLC member explained that so much happened between meetings that they found it hard to keep track of progress. The other first-grade teacher expressed a similar need for more frequent meetings to accomplish more and to get additional practice with the model. They stated, “Sometimes it felt like there was not enough time to get through the stuff in the amount of time that we had. [...] Doing more meetings more often to get more practice would have been helpful.”

### **Critical Incidents That PLC Team Members Wished Had Been Included**

The largest amount of feedback came in the form of things participants wished were included in the study that were not or that they wish could be in future studies. The following

categories represent the participant's wish list items: (a) changes to the training structure; (b) larger PLC teams that include additional grade levels; and (c) a meeting minute form that was easier to read and more applicable to their specific environment. Again, while it is unfortunate that the current study was unable to supply these wish list items, this is useful information for future studies or for those attempting to implement the TIPS model, especially those with more resources available and not under COVID-affected conditions.

### ***Training Structure***

Four of the five participants with whom interviews were conducted mentioned the frequency of trainings, how in-depth the training was, or gave suggestions on what would have been helpful to include in trainings. Both first-grade teachers, one of the third-grade teachers, and the instructional coach were included in this group. One critical incident that was not present, but that participants wished had been, was the use of follow up trainings, instead of the single initial training. Regarding additional training sessions the instructional coach said:

If we had a whole year, maybe a follow up [training] of some kind to fill in some of those holes that you saw we were missing and then maybe an extra training on some of those things I think could have been a bit helpful. Teachers need scaffolding like our students do where we have to keep revisiting it and keep learning that so having a follow-up training could have been helpful.

This participant went on to explain that while the performance feedback sheets were helpful, they weren't interactive, or in other words, participants could not ask a question and receive an answer in real time. Additional training sessions would have provided time for a question-and-answer session. One of the third-grade teachers simply stated, "It would have been helpful if there was another training somewhere in between." Taking into account the steps in the

TIPS model that were not clearly adhered to (particularly the solution implementation and planning step), the suggestion to have additional question-and-answer sessions seems wise.

While performance feedback forms can tell a team *where* they are struggling, if they don't know *how* to make changes it will be difficult for them to do so.

### ***Larger and More Dynamic PLC Teams***

Two participants expressed the desire to collaborate with additional teachers, the instructional coach and a third-grade teacher. The two PLC teams in the study each consisted of three teachers and an instructional coach who would attend each meeting. The instructional coach suggested that “if there would be a way to have a larger group [...] I think it could have maybe opened up for more collaboration and more of the bouncing of ideas off each other.” Similarly, the third-grade teacher stated, “It would have been interesting to meet with other grade level teachers to get more vertical collaboration.” While collaboration happened between team members and progress was made in their ability to use the TIPS model, as indicated by the DORA-II results, it seems the team members would have liked the teams to include more teachers in each meeting. Because each grade only contained three teachers, this would have required the inclusion of other grades, as opposed to just the single grade each team was composed of, or administration-level educators.

### ***Meeting Minute Wishlist Items***

Wishlist items referring to the Meeting Minute form were listed by two participants in the formal CIT interviews (one first-grade teacher and one third-grade teacher) and by all participants informally during their regular meetings. The first-grade teacher suggested that a more teacher-oriented form option be created for others in their position. The third-grade teacher independently suggested a solution to their peer's wish list item: a teacher-based focus group

conducted to improve the usability of the form. This focus group could be conducted as “a brainstorming session with the teachers about the minutes form” to ensure that the form was easy to understand and was applicable to the needs of the PLC teams that would be using it.

Anecdotal data collected during observation of meetings showed that PLC team members found the form difficult to use and remember from meeting to meeting. All participants wished that the form was better organized to indicate the flow of the problem-solving process and which elements should be given more or less attention.

### *Analytic Memo*

In addition to qualitative results in the form of CIT interviews, we now present information that was informally collected before, during, and after observation periods. This information was collected mostly from conversations between participants and the first author, but also in email correspondence and more informally between PLC team members. Much of this data fell into two categories that parallel information found through the DORA-II and CIT interview results: difficulty understanding the fidelity implementation portion of the Identify Solution and Create Implementation Plan with Contextual Fit step in the TIPS model (see Figure 1) and the often difficult to use meeting minutes form (see Appendix F). As can be seen from the title of the step, the third step of the TIPS model asks team members to understand and utilize multiple complex problem-solving concepts. PLC team members would often ask one another how to complete this step of the model, eventually resorting to querying the instructional coach and on occasion, the researcher present. Consequently, many of the written portions of the performance feedback gave guidance regarding how this third step could have been more strictly adhered to, as seen in the example feedback form in Appendix A.

Comments about the meeting minute form largely reflected those contained in the CIT interviews, but in more frequency. Almost every time the meeting minutes form was pulled out there were comments such as, “How do we use this again?” Other comments included areas in which participants wished the form was clearer, such as the different elements of the precision problem or goal creation steps. These comments were taken into consideration, along with the critical incidents extracted from the CIT interviews, in the formation of the alternate meeting minutes forms (see Appendices F and G).

## CHAPTER 5

### **Discussion**

The purpose of this study was to identify which critical incidents helped participants to successfully implement the Team Initiated Problem Solving model, which were unhelpful, and which they wished were present that were not. By identifying what members of each professional learning community (PLC) viewed as helpful or unhelpful, educators and researchers involved in developing new problem-solving models, or revising old ones, can tailor their work towards what will be most useful for PLC teams. The results of this study present many considerations that those designing and implementing problem-solving models may want to consider increasing the buy-in of participants and by extension, the sustainability of the program being used.

### **Findings**

The findings of this study show that while many of the procedures used in the training and providing of feedback to PLC teams were useful, there was certainly room for improvement. Interestingly, many of the unhelpful and wish list items were related to the standardized forms and procedures of the TIPS model, though some were more specific to the procedures of this study during a pandemic. These qualitative results shed additional light on what it is like to be a participant in a study introducing a new and highly structured model.

### ***Trends in What Participants Found Helpful***

Of the two categories of helpful critical incidents (the expectation to problem-solve and the performance feedback provided to them), the first of these could be considered a bit surprising, as educators' schedules are often overburdened with meetings in addition to lesson planning and other general responsibilities. However, taking into consideration that this study

was conducted following school shutdowns and general disruptions to how the school operated, it is understandable that a structured return to former practices would provide predictability and perhaps an increase in a sense of control. The request for meetings may also represent a desire to meet face-to-face with colleagues after the isolation imposed by the pandemic. Or perhaps the presence of an outside organization and the expectations of the study instilled a sense of normality that had been lost because of COVID shutdowns.

The other helpful critical incident reported by participants was the specific and consistent performance feedback provided to PLC members by the study's researchers. As is often the case in non-study meetings, how well the team had adhered to a model was not being recorded or reported prior to our involvement. While this makes sense given the limited resources of the education system, it makes it difficult to improve or know if improvement has even happened if there is no element of fidelity measurement included in the process. Having a system to keep track of their team's progress from meeting to meeting not only improved their ability to adhere to the model, but likely provided added motivation in the form of objective progress.

Additionally, the teams' appreciation for the performance feedback provided to them likely indicates that the climate of the school was one in which data recording and use was encouraged, supported, and expected. Were this not the case, weekly observations and performance feedback reports on meeting behavior may have seemed invasive.

### ***Trends in What Participants Found Unhelpful***

One aspect of the TIPS training that team members found was quite unhelpful and that many mentioned in most meetings was the meeting minutes form. This form is a TIPS specific standardized form that each PLC team is expected to use for each problem they are attempting to solve. The form (see Appendix F) contains sections that correlate to each of the six TIPS

domains. While thorough, it does have many fields for PLC members to fill out each time they are trying to solve a problem. Participants stated that it was either too complicated, too busy to look at, or not very applicable to the population they worked with or the setting in which they worked. One factor that may have affected the participants' perception of the form was that meetings only lasted about 40 minutes and were two weeks apart. Between having to refresh themselves on how the meeting minutes form works, limited meeting time, and interpreting new student data, it is understandable that PLC members left portions of the form unfilled or found it difficult to get through each meeting. While meeting frequency is not explicitly dictated by the TIPS model, the information gained from these participants is useful for administration and educators in scheduling meetings.

Two portions of the form that seemed to cause the most confusion were steps 1 (identify goal with precision) and 3 (identify solution and create implementation plan) of the TIPS model. This is in line with findings that teams find the in-depth goal formation and fidelity tracking of the problem-solving process difficult to complete when left to their own devices (Crone et al., 2016; Horner et al., 2017; McDougal et al., 2000; Powers, 2001; Rosenfield et al., 2018; Ruby et al., 2011). After three of the four observation sessions, participants asked researchers to clarify what exactly was being asked of them and at one point requested an additional "cheat sheet" for the model. Even with this and other resources, neither team breached the 75% mark for step 1 or 3.

Participants also found the structure of meetings to be unhelpful. One possible reason why participants listed the structure of meetings as unhelpful may have simply been due to the limited time of each meeting. Each team's meeting structure was such that one member's problems were focused on per meeting, meaning that each teacher had their problems addressed

once every three weeks. This seems likely due to the limited meeting time each group had, only being able to meet once every two weeks for about 45 minutes. While this was likely the best each team could do considering the overburdened schedules of teachers, it seems the groups had some insight into the fact that they did not have enough time to complete every step. Though meeting frequency and length is not explicitly dictated by the TIPS model, the information gained from these participants is useful for administration and educators in scheduling meetings.

### ***Trends in Participants' Wish List Items***

Wishlist items spanned the largest range of critical incidents and included some rather counterintuitive results. Critical incidents listed touched on (a) changes to the training structure; (b) larger PLC teams that include additional grade levels; and (c) a meeting minute form that was easier to read and more applicable to their specific environment.

Regarding the training structure, the single session of training, conducted two weeks before observations started, seemed to have some unhelpful components, and resulted in participants wishing there were more follow up trainings. The intention behind the single session of training was to be as minimally disruptive to an already overloaded group of teachers as possible, especially given the disruption of the COVID pandemic. While we believe we succeeded in this regard, according to the participants, the single session was not enough to get a clear idea of how the TIPS model works and seemed to cause undue anxiety. However, it should be noted that participants did not ask for additional, full-length trainings nor did they report that the performance feedback was unhelpful in providing added direction for focus. Rather, it seemed that PLC team members wanted a more conversational, question-and-answer format, covered in more depth in the recommendations section.

Another somewhat counterintuitive finding was that participants wished for larger groups of teachers to meet with and that problem-solving meetings were held weekly, instead of once every two weeks. Each group consisted of four participants, one participant attending both. Participants explained that in addition to more people being available for collaboration, they would have liked teachers from other grades available for what one teacher referred to as “vertical collaboration.” They also explained that the teachers in their group met informally in the halls and other areas of the school and by the time they made it to the meetings there were not as many fresh ideas as there would have been had teachers outside the grade level been brought in for consultation. The participants’ wishes to have more frequent meetings were also likely due to finding it difficult to remember each component of the model, though they did not elaborate on this point.

### **Effects of COVID**

One interesting category of findings were those related to the effects of COVID on the PLC teams and their ability to problem solve. These findings may reduce generalizability in a post pandemic world, but they give a glimpse of how teachers react to and continue to work after an emergency event and the wide scale changes this brings to the flow of work. While COVID related disruptions are hopefully diminishing, educators will doubtless face additional stressful conditions over the course of their careers.

The main disruption indicated by participants was the loss of a regular routine. This certainly makes sense, as it is hard to imagine a system or organization that wasn’t affected by COVID. However, according to the two PLC teams which participated in the study, there was a lag between the end of online schooling and a return to normal meeting and instructional routines. An unintentional benefit of this study was that it gave the PLC teams a structure to

return to. While the study may have added some additional items to each participant's task list, it seems the return to form it provided was more than just helpful to the students who benefited from improved problem-solving processes.

### **Implications for Future Research and Practice**

The most requested change for future studies using TIPS was that the Meeting Minutes (see Appendix F) form be simplified. Among these requests was a theme of the form being too busy or that it was difficult to remember how the form was supposed to be used after the time between meetings (two to three weeks). To a researcher or someone who is engrossed in the use of the Meeting Minutes form it may make sense, but to those who only see it for 40 minutes every two weeks, it is understandable that becoming reacquainted with and filling out each of the form's approximately 50 fields may be a bit overwhelming. Also, the use of the same font, similar font sizes, and all in black and white (though this is understandable to cut printing costs) may have contributed to the teams' confusion about the form and decreased their ability to differentiate between the various sections. Recommendations for two alternative versions of the form can be found in Appendices F and G. It should be considered that these are not official versions of the form, but we attempted to keep as much of the original information contained in the forms as we could.

The proposed alternate forms found in Appendices F and G aim to improve on the standard TIPS Meeting Minute form by taking the considerations listed by the participants into account. Wish list items regarding the form included that it was too complicated, too busy to look at, or that it was not very applicable to the population they worked with or the setting in which they worked. Appendix G shows a form that attempts to keep as much of the original form intact for increased validity and fidelity to the model. All components of the original meeting

minutes form (see Appendix F) are included in the form and the overall layout of the form is kept the same (meeting foundations followed by the problem-solving area and ending with an assessment of how the meeting went). Changes to the form are the addition of color to highlight each domain of the TIPS model, numbering each section to coincide with each TIPS domain, breaking down each domain into specific prompts so that participants have more direction, and added detail to the prompts in the “Fidelity and Outcomes Data” section. While this added detail increased the total number of words on the page, it is hoped that this will help teams accurately complete a section that was difficult for the PLC teams who participated in this study.

The alternative meeting minutes form found in Appendix H aims for increased usability for those learning the model. One of the larger changes comes in the form of changing each prompt into a short question that will provide team members with a bit more direction, similar to the change made to the “Fidelity and Outcomes Data” section found in the other alternate form. The form also reconfigures each domain to match the image of the TIPS model (see Figure 1), with arrows directing team members from one domain to the next. Larger and different font is used for domain titles in addition to colors to highlight each domain. Another large change has been the removal of the meetings foundation and meeting assessment components. PLC teams in the current study left these portions blank as they had their own methods for tracking this info (previously used agenda systems) which they used in combination with the problem-solving portion of the meeting minutes form. In this way this alternate form attempts to be more easily integrated into the established practices of the teams that use it.

Changes common to both forms include colored domain titles (though these are still readable when forms are printed in black and white) and the change in file format from a word document to a Google tables file. This enables teams to use the form in an interactive way in

which boxes can be checked and notes written into text fields. Forms can be easily shared between team members and kept and organized in virtual folders for ease of access and continuity. This is especially important in a post-COVID world where possible shutdowns loom. One unique addition to each form is the inclusion of highlighted options of checking if the problem being solved is new or old. Checking one or the other of the boxes in these options will black out the opposite section of the process as to focus team members on the portions relevant to the problem at hand. For instance, if a team member checks the box next to the option, “Is this an Old Problem?” the domains for the new problem steps will be blacked out.

One interesting idea presented by two participants was the use of a focus group to create the forms and structure of meetings. It is often the case that researchers create forms for participants without much input from the participants themselves. This makes sense considering the extra time that would be needed for participant inclusion in the planning process but may prevent studies from being as useful to participants as possible. Another concern may be that standardization of TIPS training and application may be in jeopardy when alterations are being made to the model’s forms. However, the benefits of participant inclusion may outweigh the extra time used and the risk to standardization that would make it a worthwhile investment. For example, having participants engage in the planning process will likely increase teacher buy-in during the study and contribute to prolonged use of the model. Participant inclusion could be used for the creation of a site-specific meeting minutes form, performance feedback form, and agenda forms. In addition to the extra time needed for focus groups, researchers may question if standardization of procedures would be at risk if forms were altered too drastically. Perhaps a middle ground approach would work best in which the six core principles of the TIPS model are included in form production but altered in presentation or readability.

Multiple participants commented on their wishes for additional mini training sessions. They suggested that future studies could be improved by holding at least one additional training at the midway point of the study which could act as a refresher and could possibly have more of a question-and-answer format, and that these trainings could focus on specific aspects of the process that the team is struggling with, such as implementation fidelity. This request was similar to the wish list item of wanting to be included in the creation of the forms the team would use and shows that PLC team members want to have a say in the programs they will be using. While this may not always be possible, especially with very large numbers of educators, administration and researchers may want to consider ways in which educators can be included while still retaining standardization. Question and answer format mini training sessions could reduce participant anxiety about not knowing each component of the problem-solving process, increase trust and rapport between participants and researchers, and increase efficiency of using the TIPS model.

### **Limitations**

The findings of this study should be considered in light of a few limitations, most having to do with generalizability of results. First, the participants involved in the study were quite homogenous. Six of the seven participants identified as white females, with one identifying as Asian and female. This limited diversity of gender and race identification may mean attempting to replicate these results with differently identified participants will produce different results than those found from the current study. In addition to gender and race homogeneity was the setting and nature of the school at which the participants worked. Because of the school's unique population and the fact that it is in a somewhat rural area, results for other populations, for example, public schools in heavily populated areas, may be different.

Second, the rather large historical effects of COVID must be taken into account when determining usefulness of the results. As schools begin to return to pre-COVID conditions (in-person education, normal school hours and days), some results from this study may become less applicable to normal circumstances. For example, the results related to the benefits of returning to a more structured schedule and meeting procedure after a loss of structure due to COVID may not apply. Even outside of more extreme circumstances, PLC teams can still drift away from structured problem-solving routines simply due to their busy schedules and natural decay of fidelity that can happen over time. Therefore, the study's effect of helping teams return to a more structured problem-solving routine may be more applicable on a larger scope than just under the unusual circumstances of a pandemic.

A broader limitation that applies to this study is that all qualitative data were gathered via self-report. Self-report may limit the objectivity of a study due to the fallibility of human memory, fears of being represented negatively, low interest in providing accurate responses, answering questions in an unfavorable situation or state of mind, among others. One example of an unfavorable situation came as one participant did their best to answer questions while taking care of a child. While this was an unavoidable situation and not intentional, it may have impacted the range of details and ideas shared. One way in which this study improves on most other CIT studies is the proximity of time between the last observation and the interviews. Interviews were conducted between one week and one month after the last observation, therefore reducing the effects of errors in recall caused by more extended periods between the last meeting of the team and the CIT interviews.

## Conclusion

As educators and students return to schools, members of professional learning communities (PLCs) are reacquainting themselves with data-driven problem-solving processes, most often through regular team meetings. Using the critical incident technique (CIT), we found that simply having a framework and expectation for problem-solving along with consistent performance feedback on how closely teams were adhering to the TIPS model proved helpful to PLC teams. Unhelpful elements included the difficult to use problem-solving form, the single session of training, and the structure of meetings (length, frequency, number of members). Participants' wish list items included additional, more question-and-answer format training sessions, the inclusion of other grade levels in their meetings, and a problem-solving form that is easier to use and is more applicable to their setting.

This study shows that the disconnect between researchers and practitioners can create difficulties in schools when studies are structured in ways that may not be as helpful as intended. For example, while the TIPS-prescribed meeting minutes form, used by teams to track problem-solving, is well designed from a researcher's perspective, PLC team members found it difficult to follow and cumbersome to become reacquainted with each meeting. Additionally, in an attempt to be minimally invasive, the current study's researchers reduced the training time of the TIPS model, but this left participants wishing for more trainings spaced throughout the study's runtime. One area in which researchers and participants seemed to be on the same page was in the weekly performance feedback provided to teams. PLC members reported that this was helpful in providing them direction for where they could improve in their problem-solving efforts.

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## APPENDIX A

**Example Performance Feedback Form**Team A Results for Apr 30

- # of problems re-addressed = 0
- # of new problems addressed = 1
- Meeting started within 10 minutes of start time:   X   Yes    No
- Meeting ended within 10 minutes of end time:   X   Yes    No

Roles filled:

- Facilitator: (Redacted)
- Minute Taker: (Redacted)
- Data Analyst: (Redacted)

TIPS Domain	% of domain addressed (last meeting)	% of domain addressed (this meeting)	Missing steps
Identify problem	81.25%	71%	Remember to fill out each of the precise elements (who, what, why, when, how, how often). This will enable you to make more helpful goals and solutions.
Identify goal	100%	100%	100% - Nice!

Solution/ implementation plan	20%	27%	Again, fidelity was missed for all members of the team. Fidelity = how will we track or report whether or not we carried out the solution?
Implement Solution	N/A	100%	

Monitor and Compare	N/A	100%	
Evaluation Decision	N/A	100%	

## APPENDIX B

**IRB Approval Form****Memorandum**

To: Ellie Young

Department: BYU - EDUC - Counseling, Psychology, & Special Education

From: Sandee Aina, MPA, HRPP Associate Director

Wayne Larsen, MAcc, IRB Administrator

Bob Ridge, PhD, IRB Chair

Date: November 24, 2020

IRB#: IRB2020-389

Title: Using the Critical Incident Technique to Improve the Training of School-Based Problem Solving Teams

Brigham Young University's IRB has approved the research study referenced in the subject heading as expedited level, categories 6 and 7.

The approval period is from 11/24/2020 to 11/23/2021. Please reference your assigned IRB identification number in any correspondence with the IRB. Continued approval is conditional upon your compliance with the following requirements:

1. A copy of the approved informed consent statement and associated recruiting documents (if applicable) can be accessed in iRIS. No other consent statement should be used. Each research subject must be provided with a copy or a way to access the consent statement.
2. Any modifications to the approved protocol must be submitted, reviewed, and approved by the IRB before modifications are incorporated in the study.
3. All recruiting tools must be submitted and approved by the IRB prior to use.
4. In addition, serious adverse events must be reported to the IRB immediately, with a written report by the PI within 24 hours of the PI's becoming aware of the event. Serious adverse events are (1) death of a research participant; or (2) serious injury to a research participant.
5. All other non-serious unanticipated problems should be reported to the IRB within 2 weeks of the first awareness of the problem by the PI. Prompt reporting is important, as unanticipated problems often require some modification of study procedures, protocols, and/or informed consent processes. Such modifications require the review and approval of the IRB.
6. A few months before the expiration date, you will receive a prompt from iRIS to renew this protocol. There will be two reminders. Please complete the form in a timely manner to ensure that there is no lapse in the study approval. Please refer to the [IRB website](https://irb.byu.edu/iris-training-resources) for more information.

Instructions to access approved documents, submit modifications, report complaints and adverse events can be found on the IRB website under iRIS guidance: <https://irb.byu.edu/iris-training-resources>.

## APPENDIX C

### IRB Consent Form

#### Consent to be a Research Subject

Title of Research Study: Using the Critical Incident Technique to Improve the Training of School-Based Problem Solving Teams

IRB ID#: IRB2020-389

#### **Introduction**

This research study is being conducted by Alexander Julian, Ellie Young, Cade Charlton, Beth Cutrer, and Christian Sabey at Brigham Young University to determine if the problem-solving process of grade level school teams can be improved through training and performance feedback. You are invited to participate because you are a member of one of these grade level teams and can help to provide information to other educators.

#### **Procedures**

If you agree to participate in this research study, the following will occur:

- For the first step of the study, teams will engage in training as a part of team meetings. The training will focus on increasing team members' skills in executing the problem solving process. A short comprehension assessment will be administered after the training.
- Your grade level meetings will be recorded (audio and video) in order to identify how teams are using their time (problem identification, intervention creation, intervention evaluation, etc.).
- You will also receive weekly performance feedback (hardcopy and digital) that will summarize your team's adherence to the problem-solving model during last week's meeting.
- Once observations have concluded, each participant will be briefly interviewed.
- All research activities (training, observations, and interviews) will take place on school property during regular school hours.

#### **Risks/Discomforts**

You may feel uncomfortable as a result of being observed and recorded during grade level meetings.

If you feel uncomfortable with participating, you may stop participating in the study for any reason at any time.

#### **In Case of Research Related Injury**

### **In Case of Research Related Injury**

BYU makes no commitment to provide financial compensation or free medical care should you be injured as a result of your participation in this research. Nonetheless, in the event of such an injury, after seeking appropriate medical attention, please contact Ellie Young at [ellie\\_young@byu.edu](mailto:ellie_young@byu.edu).

### **Benefits**

It is intended that you will indirectly benefit from the study through the training and feedback process, which will hopefully improve your problem solving skills.

### **Confidentiality**

Grade level meetings will be audio and video recorded. Recordings will be securely uploaded to a password protected Box folder that only the researchers have access to.

You are asked to use the first letter of student and fellow participant first names in all discussions that are recorded.

Recordings will be kept in the password protected Box folder for four years after the last recording and then will be erased.

### **Compensation**

There is no payment or reimbursement for participating in this study.

### **Participation**

Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without affecting your employment or standing at the school.

### **Questions about the Research**

If you have questions regarding this study, you may contact Alex Julian at [alexmjulian27@gmail.com](mailto:alexmjulian27@gmail.com) for further information.

### **Questions about Your Rights as Research Participants**

If you have questions regarding your rights as a research participant please contact the Human Research Protections Manager at (801) 422-1461; or by email: [irb@byu.edu](mailto:irb@byu.edu).

### **Statement of Consent**

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Name (Printed):

Signature:

Date:

## APPENDIX D

**TIPS Training Written Assessment**

Now that you have received the TIPS training, please answer the following questions to the best of your ability. Responses will be used for research purposes only and will not be reported to any other persons or used in any evaluative way.

1. The reason we make problems as precise as possible is:
2. 

---

What are the three roles of meeting members?
  1. Facilitator, Form Technician, Secretary
  2. Instigator, Minute Taker, Behavior Analyst
  3. Facilitator, Minute Taker, Data Analyst
  4. Educator, Data Analyst, Secretary
3. Goals consist of two main elements, what are they?
  1. What, By When
  2. Why, By Whom
  3. Where, By What
  4. Who, But Why
4. An example of a precise problem statement would be:
  1. Student S is having difficulty comprehending written text presented at her grade level, but her reading fluency skills are in expected ranges. Weak vocabulary skills may be lowering her comprehension skills.
  2. Office discipline referrals for 3rd graders are above national median for schools.
  3. Student B cussed out Student S yesterday so I sent them to the principal's office. This has been an issue in the past and has only gotten worse. It's very frustrating and the kids only laugh when it happens.
  4. We would like to see 80% of 3<sup>rd</sup> grade students meeting expectations in reading by Spring Benchmark.
5. What is an example of fidelity data:
 

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## APPENDIX E

### **Participant Critical Incident and Category Check**

1. Do the helpful/unhelpful and wish list items represent your experience?
2. Do the categories of items we have listed represent your experience?
3. Are the helpful/unhelpful and wish list items placed in the right categories?
4. Are there any categories that you may add to our list?
5. Do you have any other comments related to how we have understood and categorized your responses?

## APPENDIX F

## TIPS Meeting Minute Form

[INSERT LOGO HERE]

TIPS Meeting Minutes Guide					School:	
	Date	Time (begin and end)	Location	Facilitator	Minute Taker	Data Analyst
Today's Meeting						
Next Meeting						

Team Members & Attendance (Place "X" to left of name if present)							

Today's Agenda Items:		Agenda Items for Next Meeting	
1.	4.	1.	
2.	5.	2.	
3.	6.	3.	

## Systems Overview

Overall Status Tier/Content Area	Measure Used	Data Collection Schedule	Current Level/Rate

## Problem Solving Process

Date of Initial Meeting:				Date(s) of Review Meetings	
Brief Problem Description (e.g., student name, group identifier, brief item description)					
Precise Problem Statement <i>What? When? Where? Who? Why? How Often?</i>	Goal and Timeline <i>What? By When?</i>	Solution Actions <i>By Who? By When?</i>	Identify Fidelity and Outcome Data <i>What? When? Who?</i>	Did it work? <i>(Review current levels and compare to goal)</i>	
			What fidelity data will we collect? <i>What? When? Who?</i>	<b>Fidelity Data:</b>  <b>Level of Implementation</b> <input type="checkbox"/> Not started <input type="checkbox"/> Partial implementation <input type="checkbox"/> Implemented with fidelity <input type="checkbox"/> Stopped Notes:	<b>Outcome Data (Current Levels):</b>  <b>Comparison to Goal</b> <input type="checkbox"/> Worse <input type="checkbox"/> No Change <input type="checkbox"/> Improved but not to goal <input type="checkbox"/> Goal met Notes:
			What outcome data will we collect? <i>What? When? Who?</i>		
Current Levels:				<b>Next Steps</b> <input type="checkbox"/> Continue current plan <input type="checkbox"/> Modify plan <input type="checkbox"/> Discontinue plan <input type="checkbox"/> Other Notes:	

Notes:

[Paste new problem table(s) as needed]

## Organizational/Housekeeping Task List

Item	Discussion	Decisions and Tasks	Who?	By When?

Evaluation of Team Meeting (Mark your ratings with an "X")	Our Rating		
	Yes	So-So	No
1. Was today's meeting a good use of our time?			
2. In general, did we do a good job of <u>tracking</u> whether we're completing the tasks we agreed on at previous meetings?			
3. In general, have we done a good job of actually <u>completing</u> the tasks we agreed on at previous meetings?			
4. In general, are the completed tasks having the <u>desired effects</u> on student behavior?			

## APPENDIX G

## TIPS Meeting Minute Alternate Form 1

School:					
Date	Time	Location	Facilitator	Minute Taker	Data Analyst
Today's Meeting		Roles			
Next Meeting		Roles Next Time			
Team Members & Attendance (X if present)					
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
Today's Agenda Items:			Agenda Items for Next Meeting:		
1	3	5	1		
2	4	6	2		

Date of Initial Meeting:

Problem Name:

Is This a New Problem? ☐

1. Precise Problem Statement		4. Fidelity and Outcome Data	
Who?		What fidelity data will we collect?	
What?		When will we collect this data?	
Where?		Who will collect this data?	
When?		What outcome data will we collect?	
Why?		When will we collect this data?	
How Often?		Who will collect this data?	
2. Goal and Timeline		Is this an Old Problem? <input type="checkbox"/>	
What Change?		5. Did it Work?	
By When?		Fidelity Data: Outcome Data (Current Levels):	
3. Solution Actions		Level of Implementation Comparison to Goal	
Selected Solution		<input type="checkbox"/> Not started <input type="checkbox"/> Worse <input type="checkbox"/> Partial Implementation <input type="checkbox"/> No Change <input type="checkbox"/> Implemented with Fidelity <input type="checkbox"/> Improved but not to Goal <input type="checkbox"/> Stopped <input type="checkbox"/> Goal Met	
Who Will Carry Out The Solution?		6. Next Steps	
By When?		<input type="checkbox"/> Continue current plan <input type="checkbox"/> Discontinue plan <input type="checkbox"/> Modify plan <input type="checkbox"/> Other	
Notes:			

## Organizational/Housekeeping Task List

Item	Discussion	Decisions and Tasks	Who?	By When?

Evaluation of Team Meeting (Mark your rating with an "X")		Our Rating		
		Yes	So-So	No
1. Was today's meeting a good use of our time?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. In general, did we do a good job of tracking whether we're completing the tasks we agreed on at previous meetings?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. In general, have we done a good job of actually completing the tasks we agreed on at previous meeting?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. In general, are the completed tasks having the desired effects on student behavior?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## APPENDIX H

## TIPS Meeting Minute Alternate Form 2

Is this an Old Problem? <input type="checkbox"/>	Is This a New Problem? <input type="checkbox"/>											
<b>1. Precise Problem Statement</b>												
Who needs help?												
What is the problem?												
Where is the problem occurring?												
When does the problem happen during the day?												
Why might the problem be happening?												
How often does this problem happen?												
<div style="border: 1px solid black; display: inline-block; padding: 2px;"> <b>Date of Initial Meeting:</b>  <b>Problem Name:</b> </div>												
<b>4. Fidelity and Outcome Data</b>												
What fidelity data will we collect?												
When will we collect this data?												
Who will collect this data?												
What outcome data will we collect?												
When will we collect this data?												
Who will collect this data?												
<b>2. Goal and Timeline</b>												
What change do we want to see?												
When do we want this change to happen?												
<b>3. Solution Actions</b>												
Selected Solution:												
Who Will Carry Out The Solution?												
When will this solution be carried out by?												
<b>5. Did it Work?</b>												
Fidelity Data: Outcome Data (Current Levels):												
<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Level of Implementation</td> <td style="width: 50%;">Comparison to Goal</td> </tr> <tr> <td><input type="checkbox"/> Not started</td> <td><input type="checkbox"/> Worse</td> </tr> <tr> <td><input type="checkbox"/> Partial Implementation</td> <td><input type="checkbox"/> No Change</td> </tr> <tr> <td><input type="checkbox"/> Implemented with Fidelity</td> <td><input type="checkbox"/> Improved but not to Goal</td> </tr> <tr> <td><input type="checkbox"/> Stopped</td> <td><input type="checkbox"/> Goal Met</td> </tr> </table>			Level of Implementation	Comparison to Goal	<input type="checkbox"/> Not started	<input type="checkbox"/> Worse	<input type="checkbox"/> Partial Implementation	<input type="checkbox"/> No Change	<input type="checkbox"/> Implemented with Fidelity	<input type="checkbox"/> Improved but not to Goal	<input type="checkbox"/> Stopped	<input type="checkbox"/> Goal Met
Level of Implementation	Comparison to Goal											
<input type="checkbox"/> Not started	<input type="checkbox"/> Worse											
<input type="checkbox"/> Partial Implementation	<input type="checkbox"/> No Change											
<input type="checkbox"/> Implemented with Fidelity	<input type="checkbox"/> Improved but not to Goal											
<input type="checkbox"/> Stopped	<input type="checkbox"/> Goal Met											
Notes:												
<b>6. Next Steps</b>												
<input type="checkbox"/> Continue current plan <input type="checkbox"/> Discontinue plan <input type="checkbox"/> Modify plan <input type="checkbox"/> Other												
Notes:												