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USING COLLABORATIVE WORK GROUPS TO IMPROVE TEACHERS USE OF EBPS FOR STUDENTS WITH DISRUPTIVE BEHAVIOR

Deirdre Muldoon

Deirdre Muldoon
Candidate

Educational Specialities
Department

This dissertation is approved, and it is acceptable in quality and form for publication:

Approved by the Dissertation Committee:

Susan Copeland, PhD, Chairperson

Ruth Luckasson, JD

Michael Dougher, PhD

Julia Scherba de Valenzuela, PhD

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BY

DEIRDRE MULDOON

B.Ed. Carysfort College, 1988
M.Ed. Communication Disorders, College of Saint Rose, 1993
M.Sc. Applied Behavior Analysis, University of Ulster, 2008

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Dedication

For Joel Nudi, without whose support this work would not have been achievable. Joel has been encouraging me forward for the past five years, never doubting I could finish. He tolerated late-night classes, lots of complaining, and forfeited weekends as I wrote another paper or studied for another test. I am grateful for the difficult discussions that kept me motivated when I seemed to have very little inspiration left.

Mo ghrá thú. Go raibh maith agat.

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Deirdre Muldoon

B.ED., M.S.ED., MSc/ABA

Ph.D. SPECIAL EDUCATION

Abstract

Three teachers and one assistant principal were recruited from a middle school in a large metropolitan area of the southwestern United States to implement evidence-based practices (EBP). The teachers implemented EBPs in self-continued classrooms to ameliorate the disruptive behavior of three students. The recruited teachers and assistant principal participated in collaborative work groups biweekly for a total of 12 weeks. The teachers chose the EBPs that they were interested in implementing, and the collaborative work groups served as a forum for learning about the EBPs. Data sources included coding and thematic analysis of initial and final interviews, recording of the collaborative work groups, classroom observations, prebehavior and postbehavior checklists, and a social validity questionnaire.

Three main themes emerged from the qualitative analysis of the interview and collaborative work group data: *Attribution*, *winging it*, and *it's about me*. Results were examined in light of the leadership framework of Fullan (2001) and the consolidated framework for implementation research (CFIR) of Damschroder et al. (2009). Implications included the need for consideration of the effect of attribution of teachers (to student diagnosis, other professionals, or behavior function) on user benefit, commitment, and relationships to the implementation of EBPs. A practical implication is the need for

leadership models and a commitment to the process of adoption and implementation of the EBPs at the leadership level. An additional practical implication is the need for challenging teachers' perceptions of disruptive behavior through a process of reflective listening. Future research is needed on the effect of an individual's attribution of behavior on factors such as diagnosis or other professionals, an effect that may play out at any point in the implementation process.

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Introduction

CHAPTER 1

Evidence-based Practice: Overview of Innovation, Adoption, and Implementation

In the discipline of education, an ongoing inquiry has focused on evidence-based practices (EBP), with evidence considered in many areas of education, including mathematics, literacy, and behavior (Epstein, Atkins, Cullinan, Kutask, & Weaver, 2008; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Wong et al., 2013). EBPs for education grew out of the field of medicine and were based on the work of Sackett and colleagues in the late 1990s (Cook & Odom, 2013; Wallace & Leipzig, 1997; Wong et al., 2013). Evidence-based medicine was defined as that containing three basic components: (a) the best available evidence at that time, (b) the best professional and clinical judgment, and (c) incorporating the values of the patient or client (Detrich & Lewis, 2012; Wallace & Leipzig, 1997). The use of EBPs in medicine broadened quickly into many other areas of human service, including education of students with special needs (Detrich & Lewis, 2012). An additional characterization of the use of EBPs for many parents and educators was the fact that positive educational outcomes can be anticipated, and therefore, students are not subjected to ineffective practices in education (Cook & Odom, 2013; Detrich & Lewis, 2012; Wallace & Leipzig, 1997; Wong et al., 2013).

For the purposes of this study, EBPs in education were considered to be a change, or an innovation, requiring adoption and implementation. For an innovation to be useful, it must be adopted and implemented. Wisdom, Chor, Hoagwood, and Horwitz (2014) defined *adoption* of innovation as both the decision to proceed with an EBP and "a complex process" (p. 480). They considered the *implementation* of innovation as putting

into practice a decision that had been made. Weiner, Lewis, and Linnan (2009) distinguished adoption and implementation as the difference between the cognitive process and the behavioral process. Implementation of educational innovations has been a challenge for educators at the personal, interpersonal, and organizational levels (Varpio et al., 2012). For EBPs to be successful and consistently used, educators must decide to use them (adoption) and change their day-to-day practices to include them (implementation). Currently, many interventions in education, health care, and other fields fail to translate into meaningful differences for students or patients because of the complex process of adoption and implementation mentioned by Wisdom et al. (2014) and others (Damschroder et al., 2009; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2005).

Many researchers have examined the difficulty that exists with the implementation of innovative practices such as EBPs. In an effort to further understand these difficulties, Damschroder and her colleagues (2009) proposed a framework for implementation of EBPs in health care. The framework was called a Consolidated Framework for Implementation Research (CFIR). To develop this framework, the authors evaluated existing theories of implementation of innovations to identify constructs relevant to the implementation of EBPs in health care. This analysis resulted in five major domains, and these domains became the CFIR. The domains were (a) intervention characteristics, (b) outer setting, (c) inner setting, (d) characteristics of the individuals involved, and (d) the process of implementation. Constructs within each of these five major domains were identified. In the intervention characteristics domain, Damschroder et al. included as constructs intervention source, evidence strength and quality, relative advantage of the EBP, adaptability, trialability, complexity design quality

and packaging, and cost. Within the outer setting, they identified peer pressure as a construct. In the inner setting, they identified structural characteristics and implementation climate as constructs. In the individual characteristics domain, they identified the individual's identification with the organization, self-efficacy in relation to the individual's belief in their own ability to implement change, and knowledge and beliefs about the EBP. In all, they identified 37 constructs within the five major domains. The framework demonstrates the complexity of the process of adoption and implementation of EBPs. The layers and factors of complexity of implementation are discussed again later in this chapter.

Fullan's (2001) Leadership in Innovation and Change: An Overview

Given the complexity of change and the need for consideration of the many constructs that arise in the change process, an effective leader is important when trying to introduce an innovation to an organization. Fullan (2001) presented a model of leaderships to help in understanding the characteristics of a good leader, one who might indeed bring about change at the many needed levels (personal, organizational, systemic, and policy levels). For a change initiative to succeed--one that would ensure both adoption and implementation of EBPs--there needs to be an effective leader. Fullan (2001) identified five key dimensions for leadership that can lead to effective and sustainable change. They are (a) moral purpose, (b) understanding change, (c) relationship building, (d) knowledge creation and sharing, and (e) coherence making. He described moral purpose as acting with the purpose of making a positive difference in the lives of others. Understanding change is needed because, according to Fullan, change is complex, and understanding its depth (i.e., change) leads to more moral purpose.

Important to an understanding of implementation, particularly for this study, was Fullan's warning that often when introducing something new, there is an "implementation dip" (p. 5). Similar to the implementation difficulties mentioned above (e.g., Damschroder et al., 2009; Greenhalgh et al., 2005), Fullan identified a loss of confidence as individuals implement an innovation. He found that people may feel "anxious, fearful, confused, overwhelmed, deskilled, cautious" (p. 40) as the innovation and change are adopted. Fullan cautioned that it is important to value the difficulties in trying something new while also welcoming resistance as a positive force.

The third aspect of Fullan's framework (2001) is relationships. He viewed relationships as an important aspect of any change initiative because if relationships improve, then "things get better" (p. 5). Fullan's framework for change stated that leaders must be "consummate relationship builders . . . especially with people different than themselves" (p. 5). Fostering relationships in this way leads to problem solving and collaboration among the members of the leader's group.

The fourth aspect of Fullan's framework is that of knowledge sharing. Fullan believed that "turning information into knowledge is a social process, and for that you need good relationships" (p. 6). Fullan also believed that for knowledge sharing to be successful, the leader and the members of the groups needed a moral purpose. but perhaps more importantly, "people will not share (i.e., knowledge) unless the dynamics of change favor exchange" (p. 6).

The final dimension of Fullan's (2001) framework is that of coherence making. Once the leader of the group believes the group has the knowledge it needs, then the leader seeks to create coherence for the group; otherwise, "chaos" or "disequilibrium" (p.

6) may result. Fullan wrote that "coherence is seen as part and parcel of complexity and can never be completely achieved" (p. 8). Fullan's belief was that part of the problems in schools that were experienced in adopting innovative practices was not the "absence of innovations but the presence of too many disconnected, episodic, piecemeal, superficially, adorned projects" (p. 109). A good leader will be able to acknowledge the other dimensions of the model (e.g., knowledge sharing, relationships) while also making sense of the innovations and the people he or she will lead in the change process. A leader can elicit commitment from group members to coalesce around the complexity of change and therefore make it coherent. Fullan's belief was that there is tension between all of these dimensions and that leaders must acknowledge that the dimensions operate together in a "checks and balances fashion" (p. 7).

Another crucial aspect of Fullan's model, one overriding all of these dimensions, is another more personal layer, that of the leader's personal characteristics. This aspect highlights the importance of the leader if change is to be successful. Fullan (2001) described the personal characteristics of effective leaders and labeled them the "energy-enthusiasm-hopefulness constellation" (p. 7). He believed that leaders with these characteristics could create greater moral purpose in others and at the same time create coherence and build relationships. Effective leaders for change possess these characteristics, and in turn, the characteristics allow the members of the group to believe that difficult problems can be confronted and that change is possible.

For change to occur, the members of the group must feel commitment to the proposed change. This commitment can be seen as an external and/or internal commitment. External commitment is one that is imposed by management policies and

processes and assists people as they do their job (e.g., schoolwide discipline policies that are applied to all students and used by all teachers). Internal commitment is thought to be internal to the person; the person is motivated to change because "getting a job done is intrinsically rewarding" (p. 8). Fullan added that if the leader is to be effective and successful at implementing a change, then the leader will "ultimately be assessed by the extent to which it (i.e., the new idea or change) awakens people's intrinsic commitment, which is none other than mobilizing of everyone's sense of moral purpose" (p. 20-21). If these dimensions exist in a leader (i.e., enthusiasm, energy, hope, moral purpose, understanding change, coherence making, knowledge creation and sharing, and relationships building) in the right measure, and if they are balanced and calibrated by the leader in an ongoing and reflective way, the leader will be able to affect change, and in the words of Fullan (2001) "more good thing happen, fewer bad things happen" (p. 4).

Below, I examine adoption of innovation in education and health care more carefully, paying particular attention to the effects that individual adopters of innovation (as opposed to adoption at the organizational level) have on the uptake of EBPs. To do this, it is necessary to not only consider all of the dimensions in Fullan's (2001) framework that have been outlined above but to also consider some of the constructs that overlap into the CFIR developed by Damschroder et al. (2009). These include the personal knowledge and values of the individual educator; the context for implementation of the EBP, including trialability (i.e., the individual's opportunity to practice the innovation) and observability of the EBP (i.e., the opportunity for the adopter to be seen practicing the EBP); and the complexity of the EBP and its implementation (Levin, 2001; Metzler, Lund, & Gurvitch, 2008). Then I will examine the theoretical framework for

innovation adoption and the realities of implementation of change (e.g., barriers to adoption, teacher preparation, integrity of application or the watering down of EBPs), all in light of Fullan's (2001) framework for understanding change.

Adoption and Implementation of Innovation

Overview

Reviewing the literature on innovation or adoption of innovation is an interesting journey in time that spans from the 1970s (e.g., Kozma, 1978; Rutherford, 1977) to technological innovation today. In 1977, Rutherford, for example, rued "the ineffectiveness of educational change efforts" (p. 3). He believed then that the failure to adopt change efforts was because either adoption of an educational innovation had failed in the schools or the implementation of the innovation was watered down so much that it was unrecognizable. More recently, Metzler et al. (2008) opened a special issue of the *Journal of Teaching in Physical Education* with a discussion of the adoption of innovation across teachers' careers. They, too, wrote about the layers of context that are factors in innovation adoption: classroom, school, administrative policies, and support. They also included professional development, a teacher's stage of teaching (i.e., from preservice to veteran teachers), and teacher preparation as additional factors. Teachers, the authors said, are constantly exposed to new practices and must constantly make decisions about which instructional practices to adopt. Teachers' decisions are influenced by self, mentors, administrators, and by the complexity of the innovation (Metzler et al., 2008).

Levin (2001) highlighted the layers of context that affect innovation adoption and wrote about the real effects of policy change on educators in classrooms, changes that

often originate in politics. In analyzing the shift from policy to implementation, Levin used the example of thinking about assessment reform and the details of that process that often are lost on the policymakers, such as the tests that should be used or when they should be administered. The reform or change that is needed is often abstract and not truly thought through for the grassroots level, which results in proposals that often are very different when implemented from the adoption stage (Levin, 2001). This is just as Rutherford had suspected in 1977.

As noted earlier, in this section I paid particular attention to how individuals adopt and implement change or new practices within the contexts of policy and organization. In the next section, I examine problems with individual educators' adoption of innovation. These difficulties include the personal, interpersonal, and school context issues as already cited in the work of Levin (2001), Metzler et al. (2008), and Damschroder et al. (2009). In addition to these contexts, I examined the issues of value-fit, complexity, trialability, and observability in the context of individual educator's adoption of EBPs.

Individual Adoption

User benefit and values. The idea that individual users have the ability to stop an innovation before it starts is a caveat in innovation adoption, regardless of the innovation involved, and is one that recurs throughout the literature on adoption of EBPs (e.g., Damschroder et al., 2009; Quazi & Talukder, 2011; Weiner et al., 2009). This is the individual adopter layer that I introduced earlier in this chapter and that was outlined by Fullan (2001).

User benefit is one of the key components of effective innovation efforts. Greenhalgh et al. (2005) reviewed innovation in health care and attempted to explain the

process of diffusion of innovations by using a complex model of readiness that included dissemination of knowledge; diffusion of the innovation; and the readiness, or lack thereof, of the user system. Greenhalgh et al. noted that innovations that have a clear user benefit in terms of effectiveness are more likely to be successful. They asserted that if the innovation is not clearly advantageous to the individuals who adopt it, it simply will not go further. Weiner et al. (2009) also identified the importance of this value fit for the individual adopter. They described it as the "the degree to which targeted employees perceive innovation use as congruent with their values" (2005, p. 295). Weiner et al. asserted that failures to innovate or implement an innovation are the result of neglect or lack of attention to factors such as the user's readiness to change and the fit of the innovation at the individual level.

Opportunities to practice and support for implementation. Relating Greenhalgh et al.'s (2005) model to education, the opportunity of educators to practice and observe outcomes of the changes to their practice is important for successful adoption and implementation of change (e.g., Rubin, Sutterby, & Sailors, 2009). Greenhalgh et al. (2005) and Damschroder et al. (2009) considered opportunities for early adopters to practice the innovation repeatedly (i.e., trialability) and to observe early outcomes of the innovation as important components of successful innovation. Other considerations are practicalities such as training needed to implement EBPs and support for its implementation, as well as the individual characteristics of the adopter. The conceptual frameworks of Fullan (2001), Damschroder et al. (2009), and Greenhalgh et al. (2005) for individual adoption focused on the importance of the personal values of

individual adopters and on organizational support and readiness for innovation adoption (See Figure 1).

Perceived complexity of the innovation. Greenhalgh et al. (2005) also identified complexity as a critical factor in innovation adoption: The more complex the innovation, the less likely it would be adopted. Yarnall and Fusco (2014), for example, found that college biology instructors were less likely to use an innovative-inquiry practice if they believed that the structure and content were too complex and thus might alienate their students. These authors considered this to be "applying the brakes" to the decision to adopt "inquiry instruction" in the classrooms of the community college professors in their study (Yarnall & Fusco, 2014, p. 52). These individual professors had the ability, at the personal decision-making level, to discontinue the adoption of the new practice because of the perceived complexity of the practice for their students.

If the adopters of an innovation overcome the early difficulties of value fit, opportunities to practice, and perceived complexity, then the issue of actual implementation would arise. As mentioned, implementation arises in the work of Fullan (2010) where he considered the implementation dip and related it to coherence making and knowledge sharing because the innovation required "new skills and new understanding" (p. 40). The difficulty with implementation is examined below, particularly with regard to theory in implementation.

Implementation Theories and Frameworks.

Weiner et al. (2009) considered the complexity of implementation of innovation by describing implementation theory. Weiner et al. explained that implementation theory predicts success of implementation activities, such as planning, training, and provision of

resources. Weiner et al. distinguished implementation of an innovation from its adoption by saying that "implementation is the process of putting adoption into use" (p. 294). The authors clarified this further by describing adoption as the cognitive element, while implementation was the behavior element in the overall innovation process (Weiner et al., 2009). They believed that blurring of adoption and implementation would not be a problem if the transition from one to the other was simple and direct. However, in the case of both individuals and organizations, it is not (Weiner et al., 2009).

Weiner et al. (2009) offered a model for implementation that included factors such as organizational readiness for change; practices and policies that exist in an organization around implementation; the perceptions of individuals about the extent to which the implementation is rewarded; and "innovation-fit values," (p. 298) which refers to the extent to which individuals believe the innovation will fit with their values. Success or failure depended on the climate and fit at organizational and group levels. In using their model with these layers of understanding, the authors believed that the theory could predict success or failure of implementation (Weiner et al., 2009). Success, however, as I mentioned previously, also depends on the opportunities of individuals to observe early adopters, their ability to practice the innovations (i.e., trialability) and their access to others to talk about the innovation (Rogers, 1976). Without these and the compatibility of the innovation to the individual adopter, uptake of the innovation, diffusion, and critical mass will not occur.

Damschroder et al. (2009) encompassed many of the constructs of Weiner et al.'s (2009) theory in their CFIR framework, as mentioned above. The CFIR model included many of the issues already mentioned in the five main domains of intervention

characteristics, outer setting, inner setting, characteristics of the individuals involved, and the process of implementation. Importantly, Damschroder et al. (2009) outlined the characteristics of individuals, identifying five constructs in this domain that I outlined on Page 4. They were (a) knowledge and beliefs, (b) self-efficacy, (c) individual stage of change, (d) individual identification with the organization, and (e) other personal attributes. An individual's *knowledge* and *beliefs* can create positive or negative value for the innovation, and often "subjective opinions obtained from peers based on personal experiences are more accessible and convincing" (Damschroder et al., 2009, p. 58). This statement by Damschroder and colleagues appears to mirror the earlier statements of user benefit as identified by Greenhalgh et al. (2005). It appears that many of the implementation theory constructs examined here exposit the need for individuals to be comfortable in some way with the benefits and values of the innovation. Damschroder et al. followed up by stating that the degree to which an innovation is positively or negatively valued affects not only the process of change but also the intention to change. Self-efficacy was described by the authors as how confident a teacher feels about his or her ability to make changes. Those with high self-efficacy are more likely to make changes than those with low self-efficacy.

The *individual stage of change* was another construct considered by Damschroder et al. (2009). This construct was described by the authors as dependent on the particular model or framework used in the study of innovation adoption (e.g., the study may use the CFIR as a framework for the research). For this study, I chose Fullan's (2001) framework, and so this study will see the individual's stage of change through the constructs of the Fullan framework.

Additionally, the *individual's commitment to the organization* may affect the individual's commitment to the change (Damschroder et al., 2009). For successful change, the authors recommended, for example, measures of social context related to the psychological climate of the organization and work attitudes of individual employees. These were a measure of what the authors called *organizational citizenship* or *organizational justice*. Organizational citizenship was a reflection of how well the organization's identity was taken on by the individual. For example, organizational citizenship included how well the individuals talked about the organization. Organizational justice was about the individual's perception of fairness with regard to distribution of work and procedures. *Other personal attributes* are a consideration for the implementation of an innovation. This construct included personal traits such as intellectual ability, age, values, competence, tenure, and learning style (Damschroder et al. 2009).

Finally, Van den Heuvel, Demerouti, Bakker, and Schaufeli (2013) described adoption of change in three steps taken from classic ideas of change by Lewin, (1947) (as cited in Van den Heuvel et al., 2013). The first step is *unfreezing*. Unfreezing is where the individuals in the organization make the initial change from the status quo by making the decision to adopt an innovation. The second step in the process involves *transitioning*. At this stage, the actual change takes place. During this phase, it is important to build acceptance of the proposed change and to challenge those who are resistant to the change. The final step is the application of the change, which is *refreezing*. This involved the enforcement of the change and the reinforcement of change in order to make the change

permanent. The individual involved in the innovation adoption can be at any point in this process (i.e., unfreezing, transitioning, or refreezing).

This section was intended to be an outline of the factors affecting an individual's adoption and implementation of change or innovation. It is impossible to consider the individual, however, without considering the myriad of other constructs that influence the individual in any process of change. As outlined previously, these constructs include but are not limited to individual stage or readiness for change, self-efficacy, commitment, complexity of the EBP, trialability, and the inner or outer setting or internal or external commitments of individuals, their peers, and the institutions within which they work. In the following section, I will continue to look at the implementation of an innovation after it goes beyond the individual adopter and moves into the area of diffusion or critical mass.

Diffusion and Critical Mass

Critical mass is the point at which enough people have adopted an innovation so that the adoption is self-maintaining (Rogers, 2004). Rogers' original research in 1976 on adoption and diffusion was completed on farms in Iowa. Rogers described early adopters of new farming practices as people with larger farms, more income, better education, and a greater inclination to travel to larger cities to learn about new or innovative practices (Rogers, 2004). Diffusion of the new farming practices occurred through the process of these early adopter farmers talking to their neighbors, which resulted in the neighbors adopting and implementing new farming practices (Rogers, 2004).

Rogers (1976) proposed a model of innovation and diffusion that begins initially with a very small number of innovators. Once a critical mass occurs, the innovation

adoption takes off, and diffusion is rapid. At the point of critical mass, it is not necessary to convince people of the usefulness of the innovation (Simonson, 2009). This results in an S-shaped model of innovation adoption and diffusion of innovation (Rogers, 1976). This S-pattern of initial adopters and information exchange occurs repeatedly, whether in education, health, or business (Rogers, 1976). The initial adopter is followed by others who hasten an upswing in the adoption of the innovation. This upswing is followed by a phase of leveling off. It was Rogers who termed this as an S-shaped pattern of adoption (so called for the shape that occurs when it is graphed).

In keeping with Rogers' model of adoption and diffusion, although using different terms, Metzler et al. (2008) considered adoption on both the micro level and macro level. At the micro level, the adoption occurs at the person level or community level. At the macro level, it is the system that undergoes change and adoption (Metzler et al., 2008). They also stated that adoption must precede diffusion and implementation and that this must happen with one or more people in a "defined social system" (p. 458). The implementation or diffusion cannot happen unless there is a critical number of people within the system who are willing to adopt the innovation (Metzler et al., 2008; Simonson, 2009).

Educators and other innovation adopters may experience difficulty implementing innovations in different contexts due to individual factors (e.g., stage of change, knowledge, commitment) (Damschroder et al., 2009; Greenhalgh et al., 2005) or organizational or policy factors (e.g., perceptions of procedural fairness, readiness of the individual to change, or identification with the organization) (Metzler et al., 2008; Levin, 2001; Ozkan & Kanat, 2011). The support that educators require to implement EBPs and

to reach critical mass is multilayered. Teachers need the support of administrators to attend training, to affect behavior change, to be seen implementing the EBP, or to talk to and hold others accountable for procedures in behavior change (e.g., Chaparo, Smolkowski, Baker, Hanson, & Ryan-Jackson, 2012; McIntosh, Bennett, & Price, 2011). Fullan's (2001) framework for change outlined the need for training in new practices or innovations, but the training should be accompanied by sharing of knowledge, understanding change, and coherence making. In the absence of these, the members of the group will not feel a commitment to the process of change, and the initiative thus will fail. The result is that educators need leadership and support in these areas to effectively implement EBPs.

Additionally, Damschroder et al. (2009) considered the practicalities of adopting innovations such as resources, cost, and the degree to which the organization is linked with other organizations. These broader contexts affect change, as did issues of organizational culture and climate. Culture was defined by Damschroder et al. as encompassing the "norms, values, and basic assumptions of a given organization" (p. 58). It was different from climate, which they defined as the organizational capacity and receptivity of individuals to the change. Culture and climate differed in that the authors viewed culture as relatively stable, whereas climate can vary and is less stable over time. Implementation will be more affected by climate because it includes ideas such as feedback, relative priority, tension for change, and leadership encouragement (Damschroder et al., 2009).

In the following section, I will examine EBPs, provide definitions of EBPs, and review the current policies for their implementation. I will also analyze the current debate about what an EBP is and how that affects teachers' implementation of EBPs

Evidence Based Practices

Terminology

As mentioned, I consider EBPs to be innovations for the purposes of this chapter and research study. Smith (2005) stated simply that "most developmental disabilities are now treatable… that is current treatment can help individuals with disabilities in important ways" (p. 45). As with Cook and Cook (2011a), Smith considered evidence-based treatments to be those developed from controlled studies with objective measures of behaviors and that are relevant to the everyday lives of the individual (p. 47). Historically, these evidence-based treatments or practices have not always been available to individuals, whether in general education or special education, and for many students "wasteful and pernicious" educational activities and materials (Kozloff, 2005, p. 159) have existed for decades (e.g., whole language, additive-free diets, or sustained silent reading). Given that educators are in their profession to do good, not harm, this has led to an acceptance of the need and use for EBPs in many fields, including education (Hammersley, 2005).

Determining levels of effectiveness of EBPs (e.g., practices that are "efficacious" versus "probably efficacious" or practices with strong, moderate, or weak evidence) has allowed researchers and policymakers to quantify more rigorous standards for educational practices in a way that had not been done prior to the early 2000s (Epstein et al., 2008; Wong et al., 2013). It is this type of quantification that has allowed researchers

to compare practices in terms of efficacy (e.g., Detrich & Lewis, 2012; Roth, Gillis, & Di Gennaro Reed, (be sure of that name: 'Di Gennaro Reed') 2014; Wong et al., 2013). It is also this quantification that has allowed for the analysis of multiple high-quality research studies that examine educational practices and that has resulted in the validation of numerous education practices (Cook & Cook, 2011b).

No Child Left Behind (NCLB) (2002) was the impetus for the creation of the What Works Clearinghouse (WWC) by the Institute for Education Science (IES) (http://ies.ed.gov/ncee/wwc/). The WWC exists for the specific purpose of validating practices in education and covers many areas of pedagogy, including mathematics, literacy, science, social studies, and behavior (http://ies.ed.gov/ncee/wwc/). In addition, several authors (e.g., Cook & Odom, 2013; Detrich & Lewis, 2012) have pointed out that many other groups do similar work (e.g., National Autism Center, Promising Practices Network) and that based on the reviewing group, there are different criteria for what constitutes EBP.

Detrich and Lewis (2012) used NCLB (2002) as the backdrop for their analysis of the state of EBPs for students. One issue they noted is that researchers and policymakers have used varied terms to refer to practices that have research support. Cook and Cook (2011a, 2011b) took particular issue with the terminology used to refer to EBPs and the various terms that are often used interchangeably: "Research based, best, recommended" (p. 71). Detrich and Lewis acknowledged the confusion in terminology for EBPs and simply stated: "Multiple meanings for the same term only cause confusion among consumers. The evidence-based education movement would be well served if there were broad consensus on the meaning of terms" (p. 215).

Practices Identified

EBPs in the area of behavior change (e.g., increasing academic or adaptive skills, decreasing problem behaviors) are well researched and have been analyzed and meta-analyzed repeatedly (e.g., de Bruin, Deppeler, Moore, & Diamond, 2013; Detrich & Lewis, 2012; Roth et al., 2014; Wong et al., 2013). Wong et al. (2013) completed a comprehensive analysis of the empirical research behind EBPs for adolescents and adults with autism, many of whom had co-occurring diagnoses, such as intellectual disability (ID), Down syndrome, Fragile X, or mental illness. The authors rated EBPs based on the peer-reviewed studies and after reviewing more than 1,000 articles, chose 456 for their final analysis. For a study to be included, it had to focus on intervention practices and be "behavioral, developmental and/or educational in nature" (Wong et al., 2013, p. 10). In the final analysis, 27 practices met the criteria as an EBP (see Table 1). The authors pointed out that these EBPs "consist of interventions that are fundamental applied behavior analysis techniques . . . assessment and analytic techniques that are the basis for intervention . . . and combinations of primarily behavioral practices used in a routine and systematic way" (Wong et al., 2013, p. 19).

These EBPs of Wong and colleagues (2013) appear in the work of other researchers as single interventions or in conjunction with combinations of interventions. For example, de Bruin et al. (2013) completed a meta-analysis on antecedent, consequent, self-management, or videos based intervention strategies for adolescents and adults with autism spectrum disorders. The authors concluded that enough evidence existed to consider these interventions to be evidence based (de Bruin et al., 2013).

The National Professional Development Center on Autism Spectrum Disorders also advocated the use of EBPs for students with autism and promoted the use of EBPs for students, merging their promotion of EBPs to those outlined by Wong et al.'s (2013) report on EBPs. In another analysis of EBPs that reviewed single-subject research, Roth et al. (2014) reviewed 43 published studies that applied behavioral interventions to academic skills, to reducing problem behavior and to increasing adaptive skills. In a finding similar to that of Detrich and Lewis (2012), Roth et al. concluded that the studies reviewed for their analysis lacked measurements of treatment integrity and that this affected the strength of the evidence of the studies reviewed. The studies also lacked measurement of social validity, which was measured in only 27.9% of the articles reviewed. Indeed, the lack of a social validity measurement may be closely tied to perceptions and attributions of behavior, both of which I will discuss in this paper as barriers to adoption.

Research to Practice/Implementation Gap

Overview

Many of the issues (e.g., personal beliefs, knowledge or lack thereof) contribute to a research to practice or implementation gap. This gap was identified by Fullan (2001) as the implementation dip and by Cook and Odom (2013) as a "chasm" (p. 136). It is estimated that between 12% and 20% of students diagnosed with a disability (emotional, cognitive, or physical) present with challenging behavior and that teachers often resort to the antithesis of EBPs, that is, the use of reactive and punitive strategies to manage students' behavior (Ducharme & Schecter, 2011; Stormont, Lewis, & Covington Smith, 2005).

The research-to-practice gap has resulted in "caveats and controversies" (Cook & Odom, 2013, p. 137). These authors encapsulated some of the difficulties of implementing the myriad of EBPs. Cook and Odom's (2013) summation of the difficulties with EBPs are these: (a) they are not guaranteed to work for everyone, and perhaps this is why we see the emergence of so many different practices that are now evidence based; (b) there is inadequate and unreliable identification of EBPs, which can mean that there are practices that are effective but for which there is insufficient research and therefore are not considered to be evidence based; and (c) implementation of new practices continues to be a problem, and implementation is "the critical link between research and practice" (p. 138).

As mentioned above, a multitude of EBPs (e.g., Wong et al., 2013) have been established as efficacious for the education of individuals with disabilities, but many educators are still not implementing these practices with consistency. Indeed, throughout the literature on EBP terminology and practices, a recurring theme is the need for fidelity and integrity of the EBP implementation (Chaparro et al., 2012; Kehle & Bray, 2004) and the resultant outcomes for students. Additionally, practices are often adopted by policymakers and implemented in a top-down fashion that often results in the practice being ineffective or poorly administered. This in turn leads to educators rejecting the practice because it did not work. This has led to misunderstanding of EBPs, a misunderstanding that is compounded by the individual teachers' belief and perception of the practice.

The Watered-down Effect

Many researchers have highlighted the gap in teachers' knowledge of EBPs and have worked with teachers to establish assessment and intervention practices (e.g., Koegel, Matos-Freden, Lang, & Koegel, 2012; Stoiber & Gettinger, 2011). According to Detrich and Lewis (2012), EBPs in the classroom are less effective because they are not implemented with integrity. This watering down of EBPs has contributed to the research-to-practice gap or to a "chasm" (Cook & Odom, 2013, p. 136). It appears that EBPs employed for behavior change, as outlined by Wong et al. (2013), are empirically supported but often are not subsequently implemented with integrity. As several authors have pointed out (e.g., Cook & Odom, 2013; Detrich & Lewis, 2012) and as mentioned, poor treatment integrity results in classroom practices that are less than efficacious in the instruction and management of students.

Weakening of the effect of EBPs due to confusion of the definition of EBPs or to a lack of implementation integrity has contributed to the EBP/research/implementation divide. Detrich and Lewis (2012) considered the greatest threat to the use of EBPs to be the poor implementation of the interventions. The same authors also frequently wrote the words "lack of" in their assessment of why EBPs are not implemented effectively: lack of funding, lack of administrative support, lack of accountability (Detrich & Lewis, 2012; Fixsen et al., 2005). Yet, there is an ongoing argument for the use in schools of behavioral practices that are based on the strong evidence that they are effective in behavior change (Roth et al., 2014). For example, Roth et al. advocated for the use of behavioral interventions for individuals with developmental disability and autism, given the "medium to strong effects demonstrated" in their study (p. 281).

In the following section of this paper, I will outline some the personal and resource barriers to the adoption of EBPs that contribute to the implementation gap. For example, the individual educators' choice of an EBP is driven in part by their personal compatibility with the EBP, and this compatibility may influence how they implement the EBP, further confounding the implementation and watering down of EBPs at the classroom level. This outline includes a continuing examination of the how individual educator characteristics affect adoption through an overview of the beliefs and perceptions of educators about EBPs.

Teachers' Perceptions of EBPs

Some barriers to adoption and implementation of EBPs are easy to discern, such as a lack of knowledge about an EBP and how to implement it or a lack of resources (e.g., Bambara, Goh, Kern, & Caskie, 2012; Detrich & Lewis, 2012). Lack of knowledge as a barrier was a common theme in many of the studies of EBPs and changing behavior (Gettinger, Stoiber, & Kosick, 2008; Koegel et al., 2012; Lohrmann & Bambara, 2006; O'Neill & Stephenson, 2010; Stoiber & Gettinger, 2011; Stormont et al., 2005). Several of the authors detailed specific deficits in teachers' knowledge, such as a lack of knowledge about an accurate assessment of the function of the problem behavior (e.g., Kehle & Bray, 2004; Stormont et al., 2005). An additional important influence on adoption of EBPs and one that is entirely relevant to the personal value-fit mentioned by Weiner et al. (2009) is one of an individual's perceptions of the EBP. The individual educator's ability to facilitate or stop an innovation continues to be evident in this examination of this factor.

Given the influence of the individual educator or adopter on the adoption process, it is pertinent to examine the effects of individuals' beliefs and perceptions as they affect innovation adoption. As far back as 1976, Stewart, Goodman, and Hammond surveyed special education teachers who were using behavior modification. They asked about the training that teachers had received in behavior modification, the attitudes of the teachers toward behavior modification practices, and what behaviors they were willing to use with behavior modification (Stewart et al., 1976). A significant positive correlation was found between the attitudes of the teachers about behavior practices and their use of behavior modification procedures. There was no correlation between teachers' perceptions of behavior management practices and whether they had received formal training (Stewart et al., 1976). However, Stewart et al. (1976) also noted a positive correlation between the number of behaviors for which teachers used behavior modification practices and a teacher's perception of behavior modification practices. All of this led the authors to conclude that teacher training should focus in part on the development of positive attitudes toward behavior modification; "teacher training could profitably focus on the development of positive attitudes toward behavior modification in special education teachers (Stewart, 1976, p. 403).

There are difficulties in changing the beliefs and perceptions of teachers and educators about EBPs and whether they are best used for improving academic skills or for reducing problem behavior. The readiness of educators to attribute difficult behavior to the student and not to environmental factors or factors in their own control (Kulinna, 2007-2008; Reitman Murphy, Hupp, & O'Callaghan, 2004) is a component in the lack of implementation of EBPs. If a teacher perceives a student's behavior to be "on purpose"

and therefore outside of a teacher's control, then it less likely that the teacher will use an EBP to address the behavior (Davies, Griffith, Liddiard, Loweb, & Stead, 2015; Hastings & Brown, 2002; Weiner, 1985). The teacher's belief about the behavior becomes a barrier to adopting EBPs that could reduce the behavior. Additionally, if a teacher believes that a student's behavior is under the student's control, then the teacher's belief is often that punishment is the correct course of action and therefore, the teacher may chose to implement punishment rather an EBP (Bambara et al., 2012).

Resistance to change also may be related to teachers' beliefs and perceptions. If teachers cannot see the feasibility of the behavior change practice (Stormont et al., 2005; Reitman et al., 2004), or if the teachers are resistant to the change plan (Damschroder et al., 2009; Fullan, 2001; Lohrmann & Bambara, 2006), they may not be willing to acknowledge that the plan would work and therefore might not use it (Kehle & Bray, 2004; Reitman et al., 2004). The answer to such resistance, according to many authors, (e.g., Carter & Van Norman, 2010; Lohrmann & Bambara, 2006) is to improve consultation services for teachers in schools, but that in turn is affected by funding and by a lack of time and personnel for training.

Barriers to adopting and implementing EBPs are multifaceted. They exist in individual educators' understanding and knowledge; they are time and resource bound; and they are belief and perception bound. Barriers exist in the personal beliefs of educators about EBPs and their perceptions of the reasons for problem behavior, whether that belief is about their ability as a teacher or why a student acts a certain way.

Lack of Compliance with Federal Law

The gap or chasm emerges at all levels, including the personal, organizational, and policy levels. For example, starting at the policy level, The National Council on Disability's report *Back to school on civil rights* (2000) provided an overview of noncompliance with special education requirements nationwide. In this detailed report, the rates of noncompliance for individual education plans (IEP), the least restrictive environment (LRE), and procedural safeguards was 90.0%, 86.7%, and 92.1%, respectively. Additionally, areas of noncompliance were students' access to free and appropriate public education and transition safeguards for students completing high school. Compounding the lack of integrity of application of EBPs (i.e., the watered-down effect) (Kehle & Bray, 2004; Roth et al., 2014) and the confusion for educators in the definitions of what constitutes an EBP are the lack of adherence to the law specifically designed to safeguard the education of these students with disabilities (Cook & Cook, 2011b; Detrich & Lewis, 2012). Substantial research has found that this double disadvantage to be true; that is, that schools fail to meet the standard of the law and that teachers often do not fully understand how to apply EBPs in management of children with challenging behavior (Carter & Van Norman, 2010; Freeman & Alkin 2000; Koegel et al., 2012; Stoiber & Gettinger, 2011).

The Gap at the Classroom Level

Clearly, although the evidence (e.g., Roth et al., 2014; Wong et al., 2013) points to the need for EBPs for students, and although teachers and policymakers are attempting to implement EBPs, there is a continuing gap in supporting teachers in classrooms as they learn about and use EBPs. Several authors offered perspective on why the gap continues. For example, Kehle and Bray (2004) considered the limited application of two EBPs in

schools (i.e., function-based assessment and differential reinforcement). In addition to the difficulty of accurate and a function-based assessment of behavior, Kehle and Bray questioned the ongoing systematic capability of teachers to deliver "extrinsic rewards with allegiance" (p. 418). They concluded that the lack of knowledge in how to assess a valid and reliable function of behavior is the greatest need for teachers. They acknowledged that without understanding the function of the behavior, the environment could act on the behavior in ways that are even less well understood by the teacher (Kehle & Bray, 2004).

The difficulties contributing to the implementation gap for teachers at the classroom level are many: lack of funding; lack of administrative support; lack of accountability (Detrich & Lewis, 2012; Fixsen et al., 2005); lack of knowledge and confusion about practices (e.g., ABA identified as a practice and compared to social skills training, Burns & Ysseldyke, 2009); the capability of educators to accurately complete EBPs (e.g., function based assessment) (Kehle & Bray, 2004); and the many different recommendations of what constitutes "evidence based" (Cook & Cook, 2011b; Wong et al., 2013). Below, I will provide an overview of the policies that affect teacher preparation and teacher preparation itself.

Policy Effects on the Adoption of EBP

As mentioned, the evidence (e.g., Roth et al., 2014; Wong et al., 2013) supports the use of EBPs for students, particularly for students whose behavior challenges or disrupts. Research also documents that teachers recognize that they need additional knowledge about managing problem behavior. In a 2006 Report on Teacher Needs Survey, the American Psychological Association (APA) acknowledged the importance of

involving in-service teachers and educators in their own in-service training. A total of 2,334 teachers were surveyed and indicated that they were much more likely to be involved in in-service training if they had a say in the content than if they did not (APA, 2006). This nationwide survey highlighted the teachers' needs in several areas, including classroom management (e.g., ensuring that problem behaviors would not interfere with others) and in communication with families and caregivers about behavior and academic problems (APA, 2006). Furthermore, it highlighted the preferences of teachers in how they received training--with in-district workshops with teams of teachers working together on educational training topics--preferred over online modules or university workshops or conferences, regardless of the years of experience or the setting (e.g., urban or rural) of the teacher (APA, 2006). The National Council on Teacher Quality (NCTQ) (2014) reviewed 1,668 preservice teacher preparation programs in 836 institutions in the United States. The review also showed a continued need for preservice teachers to have additional preparation in classroom management.

The Institutes of Education Science's What Works Clearinghouse (WWC) (http://ies.ed.gov/ncee/wwc/) reviews the research on educational programs and policies. Epstein et al. (2008), writing for the WWC, issued several recommendations for behavior management training, including identifying the problem and what maintains difficult behavior, modifying the environment, teaching new skills, asking for help from colleagues, and assessing the need for schoolwide behavior change (Epstein et al., 2008). Many of those recommendations are based on practices that will be discussed in this research study (e.g., Applied Behavior Analysis [ABA], Positive Behavior Interventions and Supports [PBIS]) (Epstein et al., 2008). However, no outright policies are provided

for teachers, and the policies of Epstein et al. for the WWC are ultimately only recommendations, albeit evidence-based recommendations. The reviewers made recommendations for the use of practices but ultimately do not have authority to enforce the use of the policies or practices that they recommend.

Federal law, IDEIA (2004), required that teachers and teams working with students with disabilities who have problem behaviors consider a functional behavioral assessment (FBA). School teams are required by IDEIA (2004) to use positive behavior interventions or other strategies to support the student, particularly if the student's behavior interferes with his learning or the learning of others (Etscheidt & Clopton, 2008). However, a search of the U.S. Department of Education website for "policy & behavior management" does not bring up a policy for behavior management in U.S. schools. Rather, there are chapters on how to implement behavior management with subjects dealing with everything from challenging behavior in schools to school policy and leadership style (http://eric.ed.gov/). An individual state policy for behavior management was located for New Mexico Public Schools-- Addressing Student Behavior: A Guide for All Educators (2010) (http://www.ped.state.nm.us/). The policy of the N.M. Public Education Department (NMPED) appeared to be to follow state and federal guidelines, but no specific model or program of behavior management (e.g., positive behavior supports, applied behavior analytic teaching, or management strategies) was recommended for use in classrooms in New Mexico.

For behavior policies that exist, typically at the state and federal levels, there is a lack of standardization for the implementation of those policies at the teacher education level. The inconsistency in policy implementation at the state and federal levels has

allowed several evidence-based models to emerge (e.g., ABA, PBIS). However, more remains to be done to improve teacher education in behavior management and the subsequent behavior and academic outcomes for millions of American students.

Conclusion

In the previous sections, I briefly examined the individual educator as a user of EBPs, factors affecting innovation and adoption of EBPs, and the barriers to their implementation that contribute to the research-to-practice gap. In this examination, it is clear that work remains on a common understanding of what EBPs in education actually are (Cook & Cook, 2011b; Cook & Odom, 2013). The term EBP is reduced in clarity for educators at the front lines of implementation because of its interchangeability with terms such as *research-based practices*, or *recommended practices* (Cook & Cook, 2011b; Detrich & Lewis, 2012). This lack of clarity is compounded by the variety of groups (e.g., WWC, National Professional Development Center) that review the research evidence, each using its own conceptualization of (e.g., Epstein et al., 2008; Wong et al., 2013) and criteria for what is an EBP (e.g., Epstein et al., 2008).

Variability across teacher education programs affects knowledge of EBPs (Cohen, Hoz, & Kaplan., 2013; NCTQ, 2013, 2014; Noell et al., 2005). Beliefs and perceptions of teachers regarding EBPs are also a critical factor affecting behavior management and sustaining behavior change. It appears that changing the perceptions of teachers is often instrumental in changing teachers' implementation of behavior management following professional development (O'Neill & Stephenson, 2012; Skinner & Hales, 1992; Tillery, Varjas, Meyers, & Collins, 2010).

Understanding the difficulties inherent in the research-to-practice gap in education requires (a) understanding interpersonal (teacher to teacher, teacher to collaborator, teacher to student) relationships; (b) teachers' and educators' beliefs about behavior change; (c) factors affecting systems change; (d) the essence of what constitutes an EBP; and (e) correct implementation of an EBP. This is no small task for educators and researchers seeking to improve educational outcomes for students with special educational needs. Research continues with the caveats I have mentioned (e.g., different criteria for what is acceptable evidence) while implementation continues with the cautions mentioned, such as watering down practices and difficulty with information dissemination (i.e., diffusion of the innovation).

Problem Statement

Personal, interpersonal, organizational, systemic, policy, and political interests and barriers come to bear on adoption of EBPs within schools. Several areas are salient in the identification of the lack of implementation of EBPs related to students' disruptive behavior: (a) there are differences among researchers about how to define EBPs; (b) there is a significant research-to-practice and implementation gaps; (c) there are barriers to implementation that can begin with individual educators' beliefs or perceptions of EBPs or can be resource driven; and (d) there are problems with cohesive policies and policy regarding behavior management at the school, district, state, and federal levels.

Two issues, however, appear to override much of the larger contexts: (a) the recurring theme of the need for correct implementation of EBPs (i.e., treatment fidelity) to reduce the likelihood of a watered-down effect of the EBP; and (b) the ability of any individual teacher to stop adoption of EBPs, thus reducing the possibility of collaboration

with other teachers by reducing the observability and visibility of outcomes of the innovation. These issues could be addressed by improving educators' knowledge and understanding of the complexity of EBPs, considering personal compatibility of the teachers with specific EBPs (i.e., Weiner et al.'s (2005) value-fit), and increasing the early adopters' and other teachers' opportunities to practice and observe outcomes of the newly implemented EBP. Finally, there is a need for support of the early adopter by individuals within the organization (i.e., classroom and school) so that the early adopter has opportunities to talk to others about the outcomes of the EBP. Practice, trials, observable outcomes, and collaboration between teachers will in turn allow for critical mass, diffusion, and adoption at all levels.

Purpose

It is these overriding barriers (i.e., the limited adoption of EBPs at the individual level and poor implementation fidelity) that were the focus of this study. The purpose of this study was to investigate an adapted action research process on the adoption and implementation of EBPs by teachers and by an administrator who were educating students with disruptive behavior. It was anticipated that the study would be useful in answering questions about the social validity of the EBPs chosen by the teachers and the administrator. In addition, a purpose of this study was to plan for the diffusion of the EBPs chosen by the teachers by creating and using collaborative groups of teachers to address the need for trialability and observable outcomes.

Research Questions

The specific research questions addressed in this study were: (a) How, if at all, do collaborative work groups in an action research framework impact teachers' adoption and

implementation of EBPs with students with disruptive behavior? and (b) What barriers or supports (professional, structural, and/or environmental) that prevent or assist teachers in implementing EBPs in their classroom?

Researcher Stance

In considering my researcher stance for this qualitative research dissertation, I am struck by the intersectionality that occurs when examining distinctive personal and professional factors that emerged for me as I constructed the research study. In examining my researcher identity, I acknowledge that I am an educator first but also a clinician and a behavior analyst. This identity as a professional intersects with my personal identity as a foreigner in the United States and as a woman who is White, middle-class, and educated. The intersection of my personal and professionals identities has allowed me to investigate accepted educational practices, while drawing on my previous educational experiences as both a teacher and a student in another country. My etic view of the American educational system has afforded me a singular and inquiring perspective on the educational practices in the schools in which I have worked. The converse is also true, however: The differences and distance of my personal educational experiences do not afford me an insider's perspective of the individual educators and the system I now seek to study. This limits my understanding of the daily pressures and hierarchies that are at play in the educational environments in which I find myself. For this information, I rely on the teachers and the administrators with whom I interact. This reliance, in turn, leads me now to my ontology and epistemology, both of which arise chiefly from a behaviorist paradigm.

The intersection of my personal and professional identities undoubtedly interacted to bring me to the place where I am now engaged in qualitative research about why educators do what they do. As a behavior analyst, my reality or ontology is that I hold a behavioral paradigm for learning, interactions with the environment, and relationships. The basic beliefs of behaviorism represent for me "a worldview that defines . . . that nature of the 'world,' the individual's space in it, and the range of possible relationships to that world and its parts" (Guba & Lincoln, 1994, p. 107). It is with this in mind that I approach a methodology that is qualitative, a research method that asks about meaning (Holden & Lynch, 2004) of the world. As a researcher, I listen to and observe others and attempt the make sense of their behaviors, actions, and interactions, all while filtering the information through my functional, behavior-based reality. I am attempting to interpret meaning of others who often do not hold the same behavioral paradigm. My struggle as a behaviorist and a researcher is to maintain the objectivity of the behavioral paradigm while acknowledging the subjectivity that is inherent in qualitative research (Guba & Lincoln, 1994; Holden & Lynch, 2004; Rossman & Rallis, 2012).

My epistemology has evolved over time. My epistemological stance does not allow for a belief that "knowledge cannot be discovered, that it is subjectively acquired" (Holden & Lynch, 2004, p. 402) any more than I can credit a view that "knowledge can only be discovered" through observation and measurement (Holden & Lynch, 2004, p. 402). My stance is one that is midway between these and is one that allows for movement, interaction, and fluidity, thus allowing gathered knowledge to be used or rejected. My epistemological view is that knowledge can be both functional and fluid, that things change through interactions with others, through new learning, through

meeting those who are different, who learn differently, or who behave differently. These beliefs bring me to a further intersection, one that has been difficult to reconcile and that I have already mentioned: my perception of the objectivity of behaviorism and the subjective nature of qualitative research. To reconcile these two, I turn to an alternative research paradigm (i.e., constructivism) to understand and resolve my disquiet.

A constructivist view of reality is one that allows for "sometimes conflicting social realities that are products of human intellects, but that may change as their constructors become more informed" (Guba & Lincoln, 1994, p. 111). This view of reality fits well with the one that drove the questions for this dissertation. In this view of reality, I can acknowledge the conflicting realities of the behaviorist and the teacher. I hope that both may become more informed through the process of this research.

An inductive construction of knowledge is expected in a qualitative research methodology (Rossman & Rallis, 2012). A constructivist epistemological view sees knowledge as created in the interaction between the researcher and the participants (Guba & Lincoln, 1994). Knowledge is discovered through patterns in the interactions between the researcher and the participants (Maykut & Morehouse, 1996). This means that I must acknowledge that any patterns that emerge have emerged in part because of the interdependence between the participants and me. Therefore, I recognize that my ontological and epistemological views, which are constructivist and function based, must weigh on the findings of this study.

Theoretical Framework

The theoretical framework for this study considered the individual (i.e., the teacher) within the theory and model of change as identified by Fullan (2001). In placing

this study in Fullan's (2001) theory of change, I considered the multilayered factors influencing innovation adoption and implementation, looking primarily at individual, administrative, and organizational factors. My lens for this study was one of exploration of the behavior-based, functional adoption and use of the new learned EBPs by the individuals recruited. This adoption and use, I hoped, would lead to an increase the application of EBPs by teachers, while simultaneously increasing the time that their students with disruptive behavior spent in classrooms alongside their typically developing peers.

Fullan's (2001) theoretical framework and model of change and my functional lens for viewing the teachers' adoption and implementation of EBPs required a multilayered understanding of motivation, resilience, training, education, and teachers' ability to adapt. All of these attributes must be aligned with a leader who can advance the interests of the organization (Fullan, 2001; Garcia & Abrego, 2014; Metzler et al., 2008). The leader should be enthusiastic and hopeful (Fullan, 2001) as well as understanding and sensitive to the needs of the individuals. Additionally, there is a need for early adopters and leaders to understand the wider culture of the organization, while also engaging and training people to adopt the innovation before it is stopped in its tracks (Varpio et al., 2011). Practical considerations were related to both leadership and early adopters, and the functional lens through which I explored these considerations assisted me in gaining a broader perspective on the difficulties teachers have at the classroom level while interacting with students, educational assistants (EAs), and administrators or leaders.

Several authors identified the difficulty with the watering down of practices between adoption, implementation, and diffusion (e.g., Levin, 2001; Rutherford, 1977). For example, Levin wrote about educational innovations that started well but did not end up as a good educational idea because of obliviousness of policymakers to the detail of classrooms. In addition, as I considered the theoretical framework of change coupled with the functional lens for adoption of innovation, I recognized that in education it is compounded by a need for buy-in from teachers and for teachers to see a clear advantage to adopting an innovation, or individual teachers can stop the innovation in its tracks before it starts (Greenhalgh et al., 2005). Another feature of the theory of change (Fullan, 2001; Levin, 2001; Rogers, 1976), one that recurred in several models, was the need for visibility or observability of early adopters using the new practices (Freeman, 2006; Varpio et al., 2011). This feature is especially important given the way in which teaching is performed (i.e., a closed-door affair) according to Freeman, (2006). If early adopters want buy-in from others, they are recommended to talk, to train, and to be seen by their peers. Then, once buy-in is achieved, early adopters must achieve critical mass through practice (Simonson, 2009), visibility, (Freeman, 2006), and observable outcomes (Varpio et al., 2011). Without these factors, the adoption can fail.

An additional fundamental consideration was the characteristics of individuals in the adoption phase (Damschroder et al., 2009; Quazi & Talukder, 2011). For an innovation to be adopted by the teachers, they needed to perceive an individual value fit of the innovation (Weiner et al., 2009). A consequence of this value fit in the implementation of any innovation was the need for training (Hanley & Torrance, 2009; Quazi & Talukder, 2011; Thomas, Herring, Redmond, & Smaldino, 2013). The

functional lens through which I explored this research and the subsequent interactions with the recruited personnel shed light on the difficulty of fit of the change process for the recruited teachers. This difficulty of fit was also reflected through the Fullan (2001) model as *internal commitment*.

It is important to acknowledge an additional consideration within a theory-of-change framework, that of the culture of a school setting. Culture has the potential to be a facilitator or an inhibitor of innovation adoption (e.g., Freeman, 2006; Sawang, Sun, & Salim, 2014). School culture is influenced by interpersonal style and the communication ability of the leaders, as well as by how the hierarchy of the organization is managed (Fullan, 2001; Gregory, Henry, & Schoeny, 2007; Kezar, 2001; Van den Heuvel et al., 2013). The functional lens allowed me to see the resources or lack thereof that impeded the recruited personnel in adopting change, whether big (i.e., through the administrator) or small (i.e., through the teachers). Fullan's (2001) model for change allowed me to gauge the skills of the administrator as a leader and also to critically assess my skills as a leader in the process of change and adoption of EBPs among the recruited personnel.

Key Terms

Adoption of innovation. The adoption of innovation is both the decision to proceed with an EBP and defining the process for subsequent implementation of the practice **(**Wisdom et al., 2014).

Collaborative work group. A collaborative work group is a group comprised of the researcher and all of the recruited educators in this study.

Disruptive behavior. Disruptive behavior is any student behavior that the members of the collaborative work group define as troubling behavior in the classroom, whether to the individual target student or to the student's peers.

EBP. For this study, EBPs will be considered to be the practices that have been repeatedly shown to be efficacious for use with problem classroom behavior (see Table 1).

Implementation of EBP. Fixsen et al. (2005) defined implementation as the activities or materials that educators use to put a practice or program into practice. In this study, implementation of the EBP will be putting into practice the EBP that was chosen by the teacher during collaborative work groups (see Table 1).

Research-to-practice gap. For this study, this will be defined as the lack of integrity of the application of EBPs and the confusion for educators in the definitions of what constitutes an EBP for students with special educational needs (Cook & Cook, 2011b; Detrich & Lewis, 2012).

Student. Students for this study will be the elementary school students that the participating teachers target for a reduction of disruptive behavior**.**

Teacher preparation. Any teacher preparation program that is designed to improve the behavioral knowledge or increase behavioral practices among preservice or in-service teachers.

Team. A team can be comprised of one or two educators who are working with a student. Teams can also be one educator who is implementing EBPs for the duration of the study.

Chapter 2

Literature Review

CHAPTER 2

Introduction

Wisdom et al. (2014) summarized theories and constructs about the process of adoption of innovation through a systematic review of the literature of human service organizations. In exploring relationships in the data, Wisdom et al. identified two distinct groups of theoretical studies: (a) those that address the adoption *process* and (b) those that address adoption and *implementation*. In keeping with the factors and context that affect the adoption of innovation practices identified in Chapter 1 (e.g., individual, organization) these authors identified important influences in adoption of innovation that included socio-political and external influences, organizational characteristics, staff and individual characteristics, and client characteristics (Wisdom et al., 2014). The work of several authors (i.e., Greenhalgh et al., 2005; Metzler et al., 2008; Weiner et al., 2009; Wisdom et al., 2014) collectively pointed to the multilayered nature of innovation and implementation. Throughout this review, I will continue to discuss personal individual adoption (as opposed to adoption at the organization level) and organizational influences.

Van den Heuvel et al. (2013) described a conceptual model of adoption of change that included three steps taken from classic ideas of change by Lewin (1947) (as cited in Van den Heuvel et al., 2013). The first step is unfreezing where the organization makes the initial change from the status quo. This step, according to Van den Heuvel et al., involves activities such as creating a sense of urgency about the change and removing preventive forces such as "personal defenses and group norms" (p. 12). The second step in the process involves transitioning; this is where the actual change takes place. During this phase, it is important to build acceptance of the change and to challenge those who are resistant to the change. The final step of the change process in this conceptual

framework is the application of the change, which the authors call re-freezing. This involves the enforcement of the change and the reinforcement of the change in order to make the change last.

Van den Heuvel et al. (2013) then went on to apply this conceptual framework to a Dutch police organization in order to predict what the organization needed to be successful in change, looking particularly at the employee adaptive behavior. The results of their study illuminated some of the challenges that organizations and individuals face as they adopt new practices. Related to the factors affecting individual adoption addressed in Chapter 1, these authors wrote about the importance of meaning making and positive approaches learned over time in employee adaptability. They considered meaning making and "change information" (e.g., communication, information about the change process, and opportunities to participate in the change) to be "change resources" that "may predict employee adaptive change attitudes" and employee willingness to change (Van den Heuvel et al., 2013, p. 12). Importantly, the authors noted that change information from administrators contributed to the employees' adaptability, and this was especially true during the implementation phase (i.e., the second phase).

Johnson et al.'s (2014) recent article on adoption and implementation of the Good Behavior Game offers more insight into factors affecting an individual's adoption and implementation of EBPs. Johnson et al. reported that allowing teachers to choose the EBP for implementation increased the likelihood that the EBP would be maintained in classroom practice by teachers over time. In this study, the authors recruited 69 teachers and assigned them to three groups: one preference group and two no-preference groups. Teachers in the preference group were asked to choose between two practices (i.e., the

Good Behavior Game and teacher self-monitoring), and all of the teachers subsequently implemented the Good Behavior Game as the preferred practice. Teachers in the no-preference groups were not offered an EBP implementation choice; instead, they were instructed and coached on one of the two EBPs mentioned. Teachers in all three groups were coached weekly for a six-week period and then were observed again four weeks following the coaching period. The authors found that "simply having the opportunity to express a preference from the onset may yield higher levels of fidelity" (p. 220) in the implementation of the practice chosen, i.e., the Good Behavior Game.

Van den Heuvel et al. (2013) and Johnson et al. (2014) illustrated the interwoven nature of theory, individual adoption, implementation, and research that will be outlined in this chapter. The purpose of this chapter is to examine the literature in the areas of adoption and implementation of EBPs that I outlined in Chapter 1. I will examine the literature in the areas of (a) adoption of innovation, looking again at the particular influence of individual adoption; (b) diffusion of innovation and critical mass; (c) EBPs related to behavior management, including examining literature on the research to practice gap; (d) barriers to implementation of EBPs; (e) teacher preparation in the area of behavior management; and (f) the emerging area of implementation science. I specifically selected both research studies in these areas and policy documents related to behavior management because behavior management is affected by the individual adopter and implementer and by the wider policies of the organization.

Once again, for this chapter, EBPs will be considered to be the innovation for adoption. Specifically excluded from the review of adoption of innovation and implementation of EBPs in education were articles that dealt only with human resources,

public relations, marketing, and banking in relation to innovation adoption. Articles were also excluded if they were not published in English.

Below, I will review some of the literature examining the adoption of innovation, including a review of literature that studied how individual demographics and characteristics affect adoption of innovation. Then I will review literature regarding diffusion of innovation and factors affecting critical mass. I will examine theoretical frameworks and diffusion at the individual and organizational level. I will review EBPs and will include the research-to-practice gap, followed by a review of the barriers in adoption of innovation, with a special focus on teachers' beliefs as a barrier. Finally, I will consider the literature on preparing teachers to use effective behavior management strategies.

Adoption of Innovation

The process of innovation and implementation is studied in many arenas: policing (e.g., Van den Heuvel et al., 2013), technology (e.g., Thomas et al., 2013), health (e.g., Weiner et al., 2009; Yarnall & Fusco, 2014), and business (e.g., Elenurm, 2013), but perhaps the most prolific of these is technology (Ganter & Hecker, 2011). By completing a literature review in the area of adoption of innovation, it was necessary to narrow the field of the literature by a search using the terms *not* and *technology* or *technolog** in order to find studies relevant to change and adoption outside of information technology. Rogers (2004) reported that in 2003 alone, more than 5,000 articles were published on the topic of diffusion of innovation. Notwithstanding the exclusion noted above, innovation articles are discussed in this review that include technology as it relates to education (e.g., Garcia & Abrego, 2014; Singh & Hardaker, 2013).

Individual Adoption

If individuals in an organization do not choose to adopt and implement an innovation, the change process will halt. Researchers have found that several factors influence whether someone will adopt a new practice or technology. As mentioned in Chapter 1, these include factors such as value-fit, observability and trialability of the innovation. These individual adoption and implementation factors are examined below.

Demographics. The area of individual adoption continues to influence the adoption of innovation. Quazi and Talukder (2011) examined the demographic characteristics of employees who were asked about their perceptions of technology innovations in an Australian context. Quazi and Talukder were interested in how demographic characteristics of employees influenced their acceptance of innovation. The specific demographic characteristics examined for this study were education level, age, and training. Two of the three demographic characteristics, education and training, were positively associated with adoption of technological innovation. Prior training was linked to both positive perception and acceptance of the innovation, and the authors noted that "prior training plays an important role in the formation of a favorable attitude toward an innovation" (p. 40). Training, not age or education, was the single most important determinant for acceptance and adoption of technology. Interestingly, like the ability of individuals to stop innovation because of a need for a perceived advantage for the innovation, as outlined from the work of Greenhalgh et al. (2005), Quazi and Talukder considered a lack of "prior formal or informal training" (p. 41) a factor that could stop innovation acceptance in its tracks at the individual level.

O'Bannon and Thomas (2014) also looked at demographics, specifically at the age of teachers, as a factor when considering the use of mobile phones in classrooms. They focused on the age of the teachers as it (i.e., age) related to what type of mobile phone they used, their support for mobile phone technology in the classroom, their perception of the benefits of mobile phones in classrooms (e.g., use of cameras and access to the Internet), and their perceptions of phones as instructional barriers (e.g., texting during class, cheating by using a phone, and cyberbullying). Unlike Quazi and Talukder (2011), these authors found that age was a significant factor in the perceived benefits of mobile technology in the classroom. This was only true for teachers who were older than 50. Older teachers were less likely to own smart technology, less likely to be supportive of it, and more likely to consider it a problem in the classroom. It is noteworthy that the participants in the O'Bannon and Thomas study were from a wider age range than those in the Quazi and Talukder study. Indeed, this may have contributed to the difference in the studies in the findings regarding age and willingness to accept technology. However, it may also be true that the older adults in the O'Bannon and Thomas study had not received training on smart technology use, unlike the participants in the Quazi and Talukder study, and therefore, they were less likely to accept the technology or perceive its benefits.

Koellinger (2008) asked, "Why are some entrepreneurs more innovative than others?" (p. 21). Like Quazi and Talukder (2011), this author considered specific characteristics of individuals in attempting to answer this question. He looked at entrepreneurial activity across 30 countries between 2002 and 2004. The characteristics that he found that were associated with entrepreneurship were level of education, history

of unemployment, and a high degree of self-confidence. Koellinger pointed out that the ability of an individual to perceive innovation in business is also related to the creativity and the environment of the individual. Similar to other authors here (e.g., Kezar, 2001; Quazi & Talukder, 2011), individual and environmental variables emerged as associated with innovation adoption.

Environment of change. Characteristics of individuals also affect adoption and implementation of innovations. Davis (1991) examined innovation in nursing. He considered the effect of personal characteristics, such as resilience, motivation, and self-empowerment, on the process of innovation and change. Davis wrote about the need to consider the environment in understanding how innovations are implemented or not, and, like Quazi and Talukder (2011) and Koellinger (2008), he considered the context to be the enabler of change, although he did not identify the specific characteristics of the environment that would enable change. Davis emphasized the "need for the individual to be resilient to change" (p. 110) and considered if an "individual's perception of the situation . . . is what effects many changes and the whole ethos of change within an organization" (p. 100). He wrote about the need to acknowledge that once the change process ends, things will not return to where they had been and that resilience can come at a cost to "the individual with respect to physical, social and mental health" (p. 110). The need for a "stable state" (p. 110) is what makes people resistant to change, according to Davis, because movement and change will cause stress and conflict. Based on his ideas of the individual's perception of the nature of change, Davis surveyed nurses. He interpreted his results at the individual and interpersonal levels. Davis saw the emergence of two types of individuals: those who are active recipients of change and those who were

passive recipients of change. In making sense of this interpretation, Davis made recommendations similar to those of other researchers. Specifically, he recommended the need for more training for the new practice (e.g., Quazi & Talukder, 2011) and a management style that facilitated the individual change process by moving away from a hierarchy (e.g., Kezar, 2001).

In *The Higher Education Report*, Kezar (2001) synthesized the literature and conceptual thinking about adoption of innovation at the higher education level while also including practical recommendations and implications. Kezar provided a set of research-based principles that higher education institutions and individuals could use for change. The principles that emerged were practical. For example, Kezar recommended that organizations should engage in self-discovery through the use of "mechanisms that draw people together to talk, relate, and understand" (p. 129). This is analogous to the farmers' mechanism for information exchange that was identified by Rogers (1976) in the diffusion of innovation and identified and is an important element in the diffusion of innovation that will be discussed later in this chapter.

Kezar (2001) also suggested that change is shaped by the culture of the institution andthat institutions and administrators would do well to understand the culture of the institution before adopting and implementing new practices. With that in mind, she also cautioned that change agents should be aware of the politics and the influences that individuals have within an institution. In an interesting observation, one that is not replicated in other articles that I reviewed for this topic, she described the power dynamics and administrative or management hierarchy of institutions of higher education, including politics and the influence of politics and hierarchy on dynamics of

change (Kezar, 2001). Kezar commented that in light of these distinctive features of institutions of higher education, several considerations for adoption of change were needed. For example, she considered that change is not always good and that "it is not a panacea for all of the issues facing higher education" (p. 8). She considered what does not need to be changed, as opposed to adopting change "every five years" (p. 9), which she argued was the current model. Kezar included the realization that change is disorderly, that different levels of the institution may need different models for change, and that the change process should be connected to both individual and institutional identity. In this regard, many of the principles that this author articulated are not much different from the analysis of Greenhalgh et al. (2005), as I outlined in Chapter 1. The same myriad of factors affecting adoption of change emerged: individual, organizational, system, and political factors, blurred by personal and personalities and by the practicalities for change.

Singh and Hardaker (2013) also examined contextual factors that influence change. They did a literature review of macro-level studies (i.e., the organizational level) and micro-level studies (i.e., the individual level) of adoption and diffusion of innovation in higher education. They, too, considered the higher education context for learning technologies (i.e., eLearning). An emerging theme at the macro level was coherent communication for a clear vision of a new strategy in order to avoid fragmentation in its adoption. The authors believed this was particularly important for higher education management. Another finding was that the infrastructure should be one that can support the change, including the training in the new practices and a consideration of practical needs, such as technology that is effective.

Important themes on the micro level also emerged in Singh and Hardaker's study (2013). They found that positive attitudes, time, and the autonomy that people have to adopt and implement change were also important in the adoption of new strategies. The authors concluded with a consideration of the overall impact of individuals on change initiatives: "the decision by an individual within an organization is rarely independent of other decisions. . . . personal characteristics may be overshadowed by the effects of organizational roles and organizational position" (Singh & Hardaker, 2013, p. 119). It was their conclusion that more research was needed on the influence of factors such as "institutional structures such as library systems . . . administrative support systems" on individual-level strategies for adoption of innovation (Singh & Hardaker, 2013, p. 105).

Flett and Wallace (2005) examined the change process in school settings. They focused on autonomy, focus, and acceptance as the three dilemmas that school staff undergo as they face change. Reform and change, rather than being a simple linear process, are, according to these authors, complex and rife with contradictions, tension, and conflict. Accordingly, these problems must be managed as part of the change process. Flett and Wallace saw them linked by a common thread of control, specifically, who is in control, where the changes will be made, and controlling the rate of the change. The authors took this conceptual framework and applied it to a school in Australia as the teachers and staff at the school implemented curriculum changes. This became a qualitative study of administrators primarily responsible for implementing the new curriculum. The authors completed observations and semistructured interviews with principals and assistant principals at one large school and expanded their results with a more detailed inquiry about the findings from two of the administrators. They used these

two administrators' stories to illustrate the dilemmas of autonomy, focus, and acceptance. The stories of the principals illustrated the personal difficulties that the administrators experienced from outside influences (e.g., policymakers concerned with implementation of new governmental policies) while also accepting the need for curriculum change. With the acceptance of this change, however, was a need for a concurrent change in perceptions by the teachers because "classroom observations indicated very little use of those outcomes in planning and teaching" (Flett & Wallace, 2005, p. 202). Without the change at both levels, the teachers were able to retain autonomy in their classrooms, and the change did not occur because of this autonomy dilemma.

The quandary that Flett and Wallace (2005) described was the *where* of the problem. In this case, it was resolved by working to adopt the new curriculum in the entire school. In terms of acceptance, the administrators retained part of their previous system so that there was only a small disruption for parents and teachers. Adoption of change was ultimately considered at the macro and micro levels. The original change was necessitated by a policy change at the governmental level, but the details of the adoption of the change were at the administrator and teacher level. The authors pointed out that this macro-level change was completed while being sensitive to the autonomy of the teachers and administrators. They also pointed out that the infrastructure was important to the change initiative because without the support of management, the teachers would not have been able to retain at least some autonomy at the classroom level. Conceptually, Flett and Wallace explained change at the human level and at a level that explained the striving for compliance but with the difficulties (i.e., dilemmas) inherent in that for school staff whether they were in agreement with the change or not.

Finally, looking to a wider cultural context, Sawang et al. (2014) considered the effects of attitude, social influences, and control over 132 Chinese college students' adoption of technology. These authors found that the collectivist society of China differed from Western cultures in that the main effect for adoption of technological innovation in Chinese culture was often the interpersonal social network of family and familiar acquaintances. This led the authors to remark that Chinese adopters of innovation "are more concerned about other people's opinion, which is aligned with the traditional Chinese face value" (p. 187). According to the authors, individual adopters in Western-based studies were less concerned about others' opinions or what other people thought when adopting an innovation.

In summary, individual demographics and characteristics and environmental characteristics that arose within this review were practical, personal, and organizational (e.g., individual demographic factors such as age and prior training for adoption of change). These factors were affected by interpersonal dynamics in the form of communication and the hierarchy within organizations (e.g., Flett & Wallace, 2005; O'Bannon & Thomas, 2014). Additionally, an individual's acceptance of innovation was affected by cultural and social norms (Sawang et al., 2014). It was often difficult to appreciate the interplay between personal adoption and organizational adoption of innovation. In the following section, I will review the personal and professional factors of individuals as they related to the *diffusion* of innovation, the step after the adoption of innovation.

Diffusion and Critical Mass

Theoretical Frameworks for Diffusion and Critical Mass

Theories of change and adoption of innovations were addressed by the Evidence Based Work Groups at the University of Wisconsin-Madison (UWM) (2005). This university work group was specifically tasked with looking at the gap between innovation and practice and proposed several theoretical frameworks through which to examine the problem. They presented theoretical models with a view to explaining the gap and included in their article a discussion on cultural differences between researchers and practitioners. Some of their theoretical orientations fit well with some of the themes of this paper. For example, the rule of reciprocation in social influence theory, which relates to changing people's perceptions with a goal to changing their behavior, fits well with consideration of critical mass and diffusion of innovation (Simonson, 2009; UWM, 2005) The concerns-based adoption model addressed the change process and where individuals were in the process on a hierarchical level; this was useful in understanding the process of change from awareness to collaboration for professional development (UWM, 2005). Each model that was presented fit with the issues of adoption of innovative practices, including EBPs. So rather than clarifying the theoretical ground for innovation, the university work group contributed to this body of work by acknowledging individual differences and the different perspectives that inform research in innovation. They acknowledged that gaining and disseminating information is not enough and that research and practice must be linked and bidirectional if researchers are to understand how best to advance EBPs in education.

Hanley and Torrance (2011) assessed how teachers in the United Kingdom responded to innovation. These authors considered the gap between innovation and implementation in the adoption of a new curriculum for mathematics. In their theoretical

framework, Hanley and Torrance tried to understand the curriculum innovation in a framework of understanding the experiences of the teachers as they tried to re-establish consistency in their environments after they adopted the new curriculum, not unlike the stable state mentioned by Davis (1991). Sixteen teachers from six schools participated in a qualitative research study that was filtered through Hanley and Torrance's theoretical framework. The theoretical framework employed by the authors was one that "problematises the relationship between the individual and context, particularly in relation to innovation" (p. 68). Using a similar term to the meaning making of Van den Heuvel et al. (2013), these authors described how sense making (i.e., thinking about how teachers must make sense of the environment they inhabit), related to innovation in curricula. Hanley and Torrance saw the movement of people and ideas as central to the implementation of new ideas. They did not see that change of practices and ideas as flowing in a linear way to the teacher who is learning something new. Rather, they stated that "the process of 'becoming' is rather less predictable . . . teachers and their students are not entities which transcend their environment, but a part of the differential flow which creates it" (p. 73). They suggested that innovation in curricula might be better understood as it related to different factors (e.g., teachers' engagement, fluidity, and differences), all related and all interwoven.

Rubin et al. (2009) used change theory as the lens for their research on coaching the adoption and implementation of new practices in child-care facilities on the Texas-Mexico border. The authors used coaching to assist low-income, Spanish-speaking families and their teachers in the adoption of literacy practices to prepare the children in childcare facilities for school. They first provided educators with professional

development sessions on literacy practices and then coached them to implement in one-on-one sessions following the professional development. They rated implementation of the 39 strategies (e.g., points out sounds in daily language during daily activities, reads aloud to children, centers set up in rooms, and uses assessment to design instruction and meet needs) that had been taught to educators during the professional development sessions. By rating the implementation in this way, the authors were able to analyze the implementation of the practices as "easy . . . difficult and . . . almost impossible" (p. 95). The easy changes were practical, such as changing furniture and placing books and written materials in accessible locations for children. The difficult changes included communicating with the families, either written or verbal communication, and getting educators to allow the young children to solve their own problems. The almost impossible practices included assessment and using assessment functionally to design instruction.

Rubin et al. (2009) found that the "complexity, trialability, and observability attributes" applied (p. 101). If the changes appeared to be complex and had no clear observable advantage to the educators, they were less likely to be adopted. The authors recommended using coaching to break down complex tasks into simpler and more-observable units to facilitate implementation of innovation. Rubin et al.'s recommendation is not too different from the findings of Freeman (2006), who mentioned visibility of both the early adopter and the innovation as important in adoption and Flett and Wallace's (2005) recommendation that the innovation should fit the values of the adopter.

Garcia and Abrego (2014) examined the skills of a group of principals in Texas in a study that resulted in recommendations similar to those of Rubin et al. (2009). This study was completed and analyzed using a social-constructivism lens and qualitative analysis. The authors described the man-made constructs of the social-constructivism lens (e.g., "language thought, art and science" (Garcia & Abrego, 2014, p. 12) that allowed the principals to emerge as leaders (in this study, specifically as technology leaders). They described this further as "their experiences as principals were socially constructed events that in one form or another may have influenced the principals' technology skills" (p. 12). Initially, the authors sent to 67 principals a questionnaire about their technology skills after which five principals were chosen at random for interview following an analysis of their questionnaires. Ultimately, the authors' recommendation about adoption of technology innovations were practical considerations: They were related to the need for the principals to be knowledgeable about technology, for the principals' need for access to funding, and their ability to communicate effectively to their teaching staff the need for the adoption of innovations.

Organizational and Individual Factors in Implementation, Diffusion, and Critical Mass

In an overlap of the personal factors and diffusion in implementation and research, Pynoo et al. (2012) assessed teachers' acceptance of an educational, web-based, informational portal using usage data (e.g., frequency and reason for use) and a questionnaire. The authors explained that the portal was used by teachers and was significant as an innovation because it was a gateway to information, functioned as a community-based forum, and provided services to the teacher community. The authors'

first recommendation following the collection of usage data and analysis of the questionnaire was for the need for more teacher training on how to use the portal effectively. The authors followed this recommendation with the need for "perceived behavior control or facilitating conditions" for the training and use of the portal (p. 1309). The facilitating conditions were specifically related to teacher skills and knowledge, control of time and location, and hardware resources. Pynoo and his colleagues addressed this recommendation in both the school context and at the level of policymakers.

Pynoo et al.'s (2012) second recommendation was related to perceived and varied usefulness of the portal. This was because analysis of the data usage showed that teachers' primary use of the portal was for downloading information; teachers did not upload information or ask questions using the portal. The authors regarded this as it was related to collaboration and professional development. They said that in order for teachers to perceive the portal as a mechanism for collaboration with colleagues, the teachers needed more time and access to the portal. For this, they needed the support of the school management for professional development activities.

Pynoo et al.'s (2012) reported third implication related to teachers was the perceived ease of use of the portal, especially for infrequent users and new users. The authors recommended simple, practical solutions for increasing use by easing the task of uploading documents. It was also important to differentiate between types of users. Pynoo and his colleagues mentioned asking teachers who frequently used the portal to collaborate with peers and to promote the initiative. Finally, the authors addressed perceptions of teachers toward the initiative. Making the use of the portal easy and enjoyable was important to the teachers. They recommended the "provision of additional

content such as facts and figures, cartoons, videos, pictures etc." (p. 1316). In this study, Pynoo and his colleagues linked the personal, the interpersonal, and the organizational features that recur in this review and that are necessary for the adoption of innovation.

Varpio et al. (2012) attempted the *adoption* and *implementation* of an innovation (i.e., team-based learning) in a medical education setting. In the medical classroom context, they asked: "Is transferring an educational innovation actually a process of transformation?" (p. 357). To answer this question, they used an auto-ethnographic study to examine their personal experiences of team-based learning. Team-based learning was new to the authors, and in the context of their medical education and research, it was described as small-group learning within a larger group. The authors designed the study to provide insights into the medical school learning community. The insights that they reported were consistent with some of the difficulties I mentioned previously with introducing innovative approaches. For example, the authors wrote about contextual factors that they struggled to understand and implement as they attempted a learning innovation in a new environment. They also struggled with the accountability inherent in team-based learning and so worked to adapt the principles to fit their learning environment, all of which caused them to consider the innovation as a transformation. What began for the authors as a theory had to become operationalized so that they could transform their environment for their students. The authors discussed this transformation and how it related to educational innovation that might help educators of medical professionals share and adopt new initiatives. They concluded that their educational innovation was not simply a transfer of the idea of team-based learning from one place to another but was an innovation "that begins with a philosophy, leading to the development

of fundamental principles, operationalized through classroom techniques" (p. 365). In order to help others adopters and implementers, the authors suggested that descriptions of innovations "include analyses of the principles upon which they rely" (p. 365).

Freeman (2006) also used team-based learning as the framework for his research and as an innovation that required adoption and implementation. Similar to Varpio et al. (2012), Freeman explained that team-based learning sought to "harness collaborative small group learning and technologies" (p. 155). Freeman used a mixed-methods research design that included interviews and a survey to assess the adoption and use of team-based learning by a diverse group of college business students, including students who did not speak English as a first language. Freeman discussed the disadvantages this new approach. They included time and the "riskiness of innovation" (p. 160). These disadvantages contributed to the students dismissing the new learning format in end-of-semester feedback. Other practical considerations were space for meeting in teams, the need for instructors to be familiar with the teaching strategy (i.e., need for training), and the technology necessary to support team-based learning.

Freeman (2006) summarized the results of his study in a layered way that supported the multilayered themes that are emerging in both the adoption and implementation of innovation in general. He wrote about the wider cultural compatibility of the new instructional strategy and the need for departments and schools to support the strategy for adoption and use. He then narrowed his discussion to the individual level and noted the need for adopters to have training, support, and plenty of opportunities to practice the new strategy (Freeman, 2006). In fact, opportunities to practice were considered an important part of adoption and implementation. Freeman stated that as

"several cycles are required to refine the innovation, this might be the tipping point against adoption" (p. 165). Finally, an important part of adoption was what Freeman labeled "visibility" (p. 163). It was important, he argued, that the implementation outcomes of the new strategy are visible to students, teachers, and to the wider learning community, especially as a classroom tends to be a "closed-door affair" (p. 163). This is a recurrent theme in this review of adoption and diffusion of innovation. It is a necessary part in the diffusion of the innovation and has been described as observability in the work of Rubin et al. (2009) and Greenhalgh et al. (2005).

Freeman's (2006) research also appeared compatible with the conceptual framework presented by Flett and Wallace (2005). Freeman asserted that the innovation being adopted and implemented needed to be culturally well matched with the adopter, a position that appeared to align well with Flett and Wallace's and Weiner et al.'s (2009) notion of value-fit. Freeman cautioned that where there is a mismatch between the two, then the innovation will fail, again similar to the dissonance articulated by Flett and Wallace.

Ching and Hursh (2014) examined peer modeling and innovation adoption and use in online professional development. Ching and Hursh appeared to research the recommendations of Pynoo et al. (2012) of collaboration as a means for diffusion of the innovation. Pynoo et al. attempted to leverage technology in the school setting through a portal, whereas Ching and Hursh attempted to assess (a) what motivated teachers to use technology and (b) inter-group differences in the uptake of use of technology. Three groups of teachers, for a total of 69 teachers, participated in the Ching and Hursh study over a three-year period. The authors found that peer modeling and peer support had a

significant positive impact on adoption and use of innovation. They also saw a shift over the course of their study from the need for support-group interaction to more independent knowledge building. They believed that peer modeling facilitated the use of the new technology, particularly for novice users.

Yarnall and Fusco (2014) reported on a similar study that examined the adoption and later implementation of teaching innovation for college level biology teachers. They too considered the use of online media to help 10 community college teachers to implement problem-based learning modules in their classrooms. They were particularly interested in the practical adoption and adaptation of materials for the problem-based learning and how the instructors' perceptions of the students' abilities influenced the adoption of new practices. They found that the instructors chose to adapt the modules based on level of complexity and perceived difficulty for students as well as for time saving in the classroom. The authors concluded that a phased adoption of new practices that allowed the instructors to observe and try the new practices in the classroom was an important step toward implementation of the practices for those college instructors.

Gregory et al. (2007) chose school climate as the primary focus of their research. These authors moved away from the individual as the locus of interest in adoption of innovation and conducted their research to understand how school ecology interacts with the implementation of a new violence-prevention program in 12 schools. They used a school climate measure scale to assess the climates of the schools and measured the extent to which each school was using the program. The authors' found that the collective school environment was very important in the implementation of the curriculum at the classroom level. Within the school climate, it was the layers of support between teachers

and between teachers and administration that predicated the successful implementation of the prevention program. Motivation to implement and to sustain the change of new programs was related to teachers' trust of administrators and to common expectations and confidence in administrators. These authors found that leadership was key in influencing and maintaining change. So, while they wrote about climate as the factor, it turned out that interpersonal variables (e.g., trust) were at the heart of the innovation adoption.

The literature examined in this chapter points to the layers within adoption and diffusion of innovation that include, as mentioned in Chapter 1, the individual, the organization, and a wider cultural perspective. Within each of these layers, the literature also points to the compatibility or fit of the innovation with both the individual and the organization, the interpersonal support within the organization for the innovation, and theoretical frameworks for the innovation of the practices. In the following section, I will continue to review the literature related to EBPs with a focus on how these layers affect how educators adopt and implement these practices.

Evidence-based Practices in Behavior Management

Evidence-based practices in the area of behavior change (e.g., increasing academic or adaptive skills, decreasing problem behaviors) are well researched and have been analyzed and meta-analyzed repeatedly (e.g., de Bruin et al., 2013; Detrich & Lewis, 2012; Roth et al., 2014; Wong et al. 2013). Wong et al. (2013) completed a comprehensive analysis of the empirical research of EBPs related to the teaching and behavior management of adolescents and adults with autism, many of whom had co-occurring diagnoses, such as intellectual disability (ID), Down syndrome, Fragile X, or mental illness. The authors rated EBPs based on peer-reviewed studies. In their final

analysis, they included 456 studies out of more than 1,000 reviewed articles. Studies were included if the studies focused on intervention practices and were "behavioral, developmental and/or educational in nature" (Wong et al., 2013, p. 10). In the final analysis, 27 practices met criteria as an evidence-based practice. The authors pointed out that these EBPs "consist of interventions that are fundamental applied behavior analysis techniques . . . assessment and analytic techniques that are the basis for intervention . . . and combinations of primarily behavioral practices used in a routine and systematic way" (Wong et al., 2013, p. 19).

The National Professional Development Center on Autism Spectrum Disorders (2014) also advocated the use of EBPs for students with autism and promoted the use EBPs for students, merging the organization's promotion of EBPs to those outlined by Wong et al.'s (2013) report on EBPs. The EBPs identified by Wong et al. (2013) appear in the literature alone or in conjunction with research on several EBPs simultaneously. For example, de Bruin et al. (2013) completed a meta-analysis on antecedent, consequent, and video-based interventions for adolescents and adults with autism spectrum disorders. The authors concluded that there was enough evidence to consider these interventions evidence based (de Bruin et al., 2013).

As mentioned in Chapter 1, several other authors (e.g., Roth et al., 2014; Detrich & Lewis, 2012) also reviewed and defined EBPs for management of behavior. Detrich and Lewis argued with regard to EBPs that "the best available evidence is better for decision making than the practitioner making intervention decisions on the basis of other criteria" (Detrich & Lewis, 2012, p. 215). Often, however, the implementation of EBPs at the classroom level is less effective because they are not implemented with integrity. This

watering down and less effective implementation of EBPs has resulted in the research-to-practice gap (Cook & Odom, 2013).

In the following pages, I will review the research-to-practice gap in EBP, including a review of the barriers in the implementation EBPs and how teacher preparation programs prepare preservice educators to use EBPs. Finally, a review of the research-to-practice gap would not be complete without a review of the newly emerging area of implementation science or implementation research. This area has emerged in the past decade (Olswang & Prelock, 2015) as researchers and practitioners attempt to understand and bridge the gap between research and practice.

The Research to Practice Gap in EBP

As I mentioned in Chapter 1, the National Council on Disability's report *Back to school on civil rights* (2000) provided an overview of noncompliance with special education requirements nationwide. The rates of noncompliance for IEPs, the LRE, and procedural safeguards were high: 90.0%, 86.7%, and 92.1%, respectively. Schools continue to fail to meet the standard of the law, and teachers often do not fully understand EBP management of children with challenging behavior (Carter & Van Norman, 2010; Freeman & Alkin, 2000; Koegel et al., 2012; Stoiber & Gettinger, 2011). The evidence (e.g., Roth et al., 2014; Wong et al., 2013) is pointing to the need to use EBPs with students, but a gap continues to exist between EBPs and their application by teachers in classrooms.

Attempts to address the research-to-practice gap were apparent in the work of Swanwick and Marschark (2010) as they considered the application of EBPs in general (i.e., not specifically related to behavior management) for the education of deaf children.

In their writing, the authors acknowledged the difficulty of connecting research to practices in education, commenting that the research-to-practice gap for deaf children "suffers from context and methodological conundrums which often render the direct application of findings to teaching and learning problematic" (p. 231). These conclusions appeared to be similar to the conclusions of Detrich and Lewis (2012) and others (e.g., Roth et al., 2014) that the integrity of the application of the research findings is missing in the implementation at the level of classroom practice, even when the application of the EBP is to provide positive reinforcement (Kehle & Bray, 2004).

Stormont, Reinke, and Herman (2011) surveyed 239 general educators from five school districts about their knowledge of EBPs for students with mental health difficulties and/or challenging behavior. In this survey, they asked educators about 10 specific EBP (no need to italicize) *packages* (e.g., The Good Behavior Game, Positive Behavior Supports in Schools [PBIS]). The results indicated that the only evidence-based package that most of the teachers recognized was PBIS. For the remaining nine packages that Stormont and her colleagues surveyed, the majority of the teachers (82% to 92% for the surveyed teachers) had never even heard of them. However, the conclusion of the authors was this: How can teachers be expected to implement EBPs if they have never heard of them? Similar to Fixsen et al. (2005) in their synthesis of the literature on implementation research, Stormont et al. acknowledged that access to information about an EBP alone was not enough for educators to be able to implement EBPs; educators required ongoing training and support to effectively implement EBPs.

Ducharme and Schecter (2011) proposed an approach—the "keystone approach"—to bridge the gap in the implementation of EBPs (p. 257). Similar to the perspective of

Kehle and Bray (2004), these authors considered function-based assessment and intervention to be an important part of the successful implementation of EBPs for students with challenging behavior. To this end, they designed a conceptual model as a way to define the "keystone skills" that students need and that are most useful for a proactive approach to classroom management. They identified compliance, social skills, on-task skills, and communication skills as keystone skills. The authors anticipated that the keystone skills were possible replacement behaviors for the problem behaviors of the students. Use of a conceptual model that incorporated the teaching of these skills may, according to the authors, help teachers in functional assessment of problem behavior.

In a 2009 article, Burns and Ysseldyke examined the prevalence of EBPs for behavior management and instructional practices in special education. They surveyed teachers and school psychologists about practices that are used in special education, including applied behavior analysis, direct instruction, and social skills training. They found that teachers reported using these practices weekly, but that there was, according to the authors, room for improvement. Somewhat worrying for the science of applied behavior analysis upon which many of the EBPS are based is that it was viewed unfavorably by many of the teachers and psychologists surveyed. The fact that many of the EBPs reviewed by Wong et al. (2013) were from the field of applied behavior analysis may indicate ongoing confusion among teachers and educators about the true nature and the origin of EBPs and of ABA.

Similar to Burns and Ysseldyke's (2009) attempt to explain the research-to-practice gap, Noell et al. (2005) assessed teachers' treatment implementation of EBPs for 45 students. The authors were particularly interested in the effects of performance

feedback on the treatment integrity of the teachers' implementation of behavior-change practices. Noell et al. reported that the use of performance feedback that used graphic representation of the integrity of the treatment significantly improved the teachers' implementation of the treatment plans. In addition, review of the implementation data with the teachers was significant in maintaining the implementation of plans.

In a comparable article, Reitman et al. (2004) evaluated the effect of consultant feedback on teachers' use and effectiveness of token economies. Teachers and at-risk students in Head Start classrooms were recruited for behavioral consultation. The authors trained the teachers on selecting target behaviors and the use of reinforcement. The results showed the effectiveness of token systems used for decreasing disruptive behavior in the classroom. The discussion centered, however, on teachers' inability to perceive changes in the children's behavior, especially if the changes were gradual. As part of their discussion, they recommended the use of feedback graphs as a tool to aid teachers in maintaining behavior change. The authors noted that the teachers showed only variable support for the token system, despite the reduction in challenging behavior, but the teachers were more likely to implement the behavior change if an outside observer was present.

It appears that the research-to-practice gap could be lessened if there is follow up and accountability to an individual outside of the classroom (Noell et al., 2005; Reitman et al., 2004). More recently, Nadeem, Gleacher, and Beidas (2013) attempted to make this consultative role fit into the broader context of child mental health, particularly as used in bridging the research-to-practice gap. They proposed functions of consultation that included engagement of practitioners, accountability of practitioners and consultants,

and sustainability planning. Although the authors' consultation model was not specifically about education, it could be applied to education as teachers attempt to engage in, plan for, and sustain behavior change.

Accountability for using EBP is an ongoing theme for the successful implementation of EBPs. McIntosh et al. (2011) referred to accountability as they discussed their findings in a 2011 study. They acknowledged that a preponderance of training is provided toschools that ultimately does not lead to substantial change in staff behavior. They outlined two steps that could be useful in implementation of behavior changes: (a) providing training in EBPs (they used School-Wide Positive Behavior Supports [SWPBS]); and (b) development of an evaluation of the implementation of the EBP, including documentation that demonstrated change and improved outcomes. Their most significant recommendation was similar to that of Nadeem et al. (2013), Noell et al. (2005), and Reitman et al. (2004); they recommended continuous feedback to teachers for the sustained evaluation and improvement and ongoing measurement of the fidelity of the behavior-change implementation.

Chaparro et al. (2012) used a systemwide organization-change model in their study. Chaparro et al. (2012) presented a model for effective practice called the Effective Behavior and Instructional Support System (EBISS). Their motivation for developing the system was similar to that of others (e.g., McIntosh et al., 2011; Nadeem et al., 2013) in that they wanted to improve outcomes for students by reducing problem behavior and improving literacy. Chaparro et al. (2012) also used a SWPBS system for behavior change in addition to a schoolwide reading model. The systems were implemented in 140 schools over a two-year period in Oregon. A factor in the implementation of change in

this study was that all of the professionals were asked to cross-train, (i.e., school psychologists were trained in literacy and teachers were trained in behavior change) resulting in collaborative efforts across school teams. These authors mentioned the need for accountability and fidelity in keeping with the finding of other authors mentioned here (i.e., Nadeem et al., 2013; Noell et al., 2005; Reitman et al., 2004).

The research-to-practice gap continues to be substantial. There have been several attempts by researchers to close the gap, and as outlined above, these measures have included surveying teachers to assess for knowledge deficits and areas for development (e.g., Burns & Ysseldyke, 2009; Stormont et al., 2011), use of consultative feedback (Noell et al., 2005; Reitman et al., 2004), and systemwide changes and collaboration (Chaparro et al., 2012). An additional attempt to close the gap was made by Little and King (2008). These authors used online modules to assist with the knowledge gap and with ongoing support for educators. They acknowledged that simply providing the knowledge was not enough (i.e., similar to Fixsen et al., 2005; Stormont et al., 2011) and that time and support were also needed (Little & King, 2005). The use of ongoing consultation appeared to create accountability for the teachers (e.g., they had to submit videos of themselves) and increased the fidelity with which they implemented the EBP (Little & King, 2008).

Cook and Odom's (2013) summation of the difficulties of the implementation of EBPs are these: (a) they are not guaranteed to work for everyone, and perhaps this is why we see the emergence of so many different practices that are now evidence based; (b) there is inadequate and unreliable identification of EBPs, which can also mean that there are practices that are effective but are not adequately reviewed and therefore are not

considered to be evidence based; and (c) implementation of new practices continues to be a problem, and implementation is "the critical link between research and practice" (p. 138).

As I mentioned in Chapter 1, Fixsen et al. (2005) defined implementation as the activity that educators use to put a practice or program of "known dimension" into practice (p. 5). Cook and Cook (2011b) attempted to explain the EBPs in special education and provided clarity to the differences between the analyses already mentioned in Chapter 1, that is, the work of Wong et al. (2013) and Epstein et al. (2008). The considerations explored in the research-to-practice gap included lack of adherence to the laws (e.g., reduced compliance with IEPs and the LRE); lack of adherence to the EBPs, resulting in a watered-down effect (e.g., Swanwick & Marschark, 2010); and the need for accountability (e.g., Noell et al., 2005). In addition, there are barriers that reduce teachers' use of EBPs, and in the following section of this chapter, I will return to individual and organizational barriers to examine the literature in this regard.

Barriers to Implementation of EPBs

As I mentioned in Chapter 1, some barriers to adoption and implementation of EBPs are obvious, such as a lack of knowledge about an EBP and how to implement it. Other barriers are less obvious, such as the personal value-fit or an individual's perceptions of the EBP as mentioned by Weiner et al. (2009). Other barriers were the opinions of teachers or barriers that were related to implementation such as lack of specific resources or a lack of access to ongoing training. Specific issues related to barriers are examined below are (a) barriers and a conceptual framework, (b) teachers' beliefs and perceptions as barriers, (c) barriers and attribution and, (d) practical barriers that influence adoption and implementation.

Barriers and Conceptual Frameworks

Domitrovich and her colleagues (2008) produced a conceptual framework for the implementation of EBPs in schools. This conceptual framework is similar in scope to the frameworks already mentioned (e.g., CFIR, Fullan, 2001). The authors captured familiar themes of individual-level, school-level, and macro-level factors that can affect implementation quality. At the individual level, they identified attitudes and perceptions of the adopters toward the EBP and professional and psychological characteristics of the adopters and implementers as factors. The school-level factors included administrative leadership and classroom climate, among other. The macro-level factors included policies, financing, and leadership (Domitrovich et al., 2008).

Locke et al. (2015), using Domitrovich et al.'s (2008) framework, examined the challenges of implementing EBPs for students with autism in an urban school setting. In their introduction, Locke et al. noted the watered-down effect that was the result of the "lack of fit between the intervention and the needs and capacities of the school setting" (p. 54). They investigated this lack of fit on the implementation of EBPs for social impairments of students with autism spectrum disorder (ASD). They recruited nine students with autism, nine staff members, and 100 typically developing children from six classrooms in two schools. Training was provided over a 12-week period to the school staff members on how to better engage the students with autism when the students approached peers or when they were approached by peers in social interactions during recess.

Ultimately, the authors identified a number of barriers at both the individual level and the school level. For example, policies regarding recess were a barrier; if recess was

canceled or was limited in some way (e.g., rain or cold), then the strategies taught by the authors were not implemented. Policies regarding levels of staffing and training were also barriers identified by the recruited staff. Particular to the individuals in the study were the issues of competing demands of the classroom and their perception of levels of respect and support. Finally, participants also identified the availability of resources as a reason for the lack of implementation of the strategies. The authors concluded with the importance of the identification of the barriers and the need for school-based research to assist with the implementation of EBPs.

As I mentioned above and in Chapter 1, Damschroder and her colleagues (2009) generated the CFIR, which combined constructs across 19 implementation theories to offer "an overarching typology to promote implementation theory development and verification about what works where and why across multiple contexts" (p. 50). The CFIR had five domains, one of which was the characteristics of the individuals involved. Within this domain, the authors identified knowledge and beliefs about the new intervention, self-efficacy (i.e., the individual belief in their own ability to implement change), individual stage of change (i.e., the individual ability to move to sustained use of the new practice), individual identification with the organization (i.e., the individual degree of commitment to the organization), along with "other personal attributes" (p. 59) as subconstructs within the individual domain. Within the subconstructs, Damschroder et al. placed attitude, perception, and value of an individual's perception of a change. Similar to Fullan (2001), they identified characteristics such as enthusiasm, belief in oneself, and willingness to adopt change as necessary for a successful change process. Also similar to Fullan, they mentioned positive perception of the individual toward the

organization or the individual's degree of commitment to it, because without the commitment, the individual may not be fully willing to engage in change.

Important in Damschroder et al.'s (2009) review is the "Other personal attributes" category (p. 59). In this category are other traits, such as "tolerance of ambiguity, intellectual abilities, motivation, values, and learning style," and according to the authors, these are areas that require more investigation by researchers. Considering teachers' perceptions within a theoretical model is helpful in understanding the place that the individual has in the implementation of the change and of the change process itself.

Teachers' Beliefs and Perceptions as Barriers

Supporting both Domitrovich et al.'s (2008) and Damschroder et al.'s (2009) theoretical stance with regard to the individuals is the work of Zubkoff, Carpenter-Song, Shiner, Ronconi, and Watts (2016). These authors considered clinicians' perceptions of the implementation of EBPs with regard to psychotherapies for post-traumatic stress disorder (PTSD). The authors interviewed 22 therapists and coded the responses of the therapists to create themes regarding the implementation of EBPs for PTSD. Zubkoff et al. concluded that they had come across a theme that had been overlooked in prior research, that is, "clinicians' perceptions of patient readiness" (p. 255). The perception that the patient was not ready for therapy that used an EBP was a key barrier to the implementation of the EBPs. Clinicians' perception that patients were not ready was an important variable in the uptake, or lack thereof, of EBPs in psychotherapy (Zubkoff et al., 2016). Participants expressed concern for their patients and did not want to overwhelm them and therefore did not use the EBP.

The individual stage of change or willingness to adopt change was a consideration for Bambara et al. (2012). They used a survey to ask 293 professionals (teachers, therapists, behavior support professionals) in five states about barriers and enablers to the implementation of behavioral supports in schools. The purpose was to understand the factors influencing school teams as they completed function-based assessments and positive behavior supports. Professionals recruited had to be trained in positive behavioral support practices (i.e., lack of knowledge was not a barrier) and had to have experience implementing EBPs. The school staff surveyed was asked not only to indicate if the survey item was a barrier but to also rate the level of impact of the item as a barrier. Items that emerged as barriers were beliefs, time, and training. The authors mentioned that staff resistance to changing their behavior management practices was a barrier, as were beliefs that problem behavior should be punished and that students with problem behaviors should be moved to more-restrictive placements. These "core beliefs of the school or mindset of the school staff" (Bambara et al., 2012, p. 238) who are resistant to change were identified by the authors for the shift in staff beliefs from the time of initial trainings to the time of implementation of behavior management techniques. Other barriers identified were lack of time and lack of training and suggested to the authors that there was not a good match between the requirements of PBIS and the school routines.

Stormont et al. (2005) examined teachers' opinions as they related to the feasibility of the implementation of EBPs. These authors used PBIS as the framework for investigating the opinions of teachers and classroom staff about the feasibility of using PBIS strategies in classrooms. Stormont et al. reported that most of the PBIS strategies were rated as feasible by the teachers: Strategies included environmental analysis for

problem behavior, positive verbal feedback, data collection, and visual supports. It appeared that the strategies that teachers thought were feasible were not content heavy—that is, the ones for which lack of knowledge was not a barrier—and were practical and easily implemented. Stormont et al. (2005) found, however, a difference in perception of importance of the EBP versus feasibility of implementation of the EBP. They concluded that the "difference in perception of importance versus feasibility may reflect the weakness in most schools . . . to provide systemic support" (p. 137).

Barriers and Attribution

Morin (2001) used attributional theory and change theory as he considered the correct approach for the "resistant teacher." He believed that the necessary ingredients for changing teachers' perceptions of behavior were "favorable attitude, social pressure, and perceived personal efficacy" (Morin, 2001, p. 64). Morin pointed out that training can be provided on behavior management and on EBPs but that the teachers must believe that the students can change, despite past experiences, and that the teacher can be effective in implementing the change. There is evidence, however, that teachers can be prepared during preservice and in-service training to use different types of behavior management procedures, both for monitoring their own teaching and management behavior and for the behavior of their students (Maag & Larson, 2004; Robinson & Swanton, 1980). In the review of teacher preparation, however, that there is a disjointed approach that does not fully address the needs of the students with problem behavior or the teachers who work with them.

Kulinna (2007-2008) examined the beliefs of physical education teachers, although she also wanted to understand teachers' attributions for the cause of problem

behavior. Some of the barriers to implementation of EBPs identified by Kulinna were that "teachers do not have the time or the skill to reflect on the consequences of their own teaching" (p. 28) and that teachers see themselves as there to teach, not to manage behavior. In another conclusion, Kulinna said that teachers might rate themselves as good teachers, especially after several years of teaching, and therefore might attribute problem behavior to the student, as "teacher's self-belief is that of a well-run classroom" (p. 28).

Attributing problem behavior to students is a barrier for the successful use of EBPs. This was evident in the results of a management of the challenging behavior query by Rae, Murray, and McKenzie. (2011). The respondents identified psychological principles, environment, and reactive strategies as the management strategies for problem behaviors. This led the authors to identify a skills gap for teachers and classroom staff, as none had identified EBPs in the form of positive behavior supports as a management strategy for challenging behaviors. The participants of the study attributed the challenging behaviors of the students to internal causes. These attributions may lead to less helping behaviors from the teachers and school staff (Juvonen & Weiner, 1993; Weiner, 1985) and more anger, which in turn could lead to an intensification of the challenging behavior from the student (Rae et al., 2011).

Practical Barriers Influencing Adoption and Implementation

Davis (2001) surveyed 420 resource teachers about their perceptions of the competencies they needed to be an effective special educator. The author used a ranking of the teachers' responses to understand their perceptions. Of the top five perceptions of the teachers, three were related to instruction, and two were related to personal and

communication issues. No. 4 on the list was “knowledge of and skill in employing a variety of pupil behavior management techniques” (Davis, 2001, p. 597). One finding related to practical barriers for adoption and implementation was the level of frustration that teachers felt about the expectations of their jobs. Davis made a recommendation that any change that is adopted for “good” (p. 113) is dependent on an open, supportive, and trusting relationship between teachers and their managers. Davis identified a “gulf” between the teachers and managers and stated that closing this gap would be helpful in developing effective relationships that could sustain change in practice.

Barriers and practicalities of successful inclusion of students in general education classrooms was the focus of a study by Lohrmann and Bambara (2006). In this qualitative study, the authors interviewed 14 teachers about their experiences with students with special education needs. The authors again considered the culture of the school as an important facilitator or inhibitor in the implementation of inclusionary practices for students with special needs. Other barriers included conflicts with parents or colleagues, lack of in-class support, individualized support requirements, and staff training or knowledge needs, particularly in the areas of behavior change and maintenance of change.

It appeared from the findings of these authors (Bambara et al., 2013; Lohrmann & Bambara, 2006) that the difficulties with implementation of research practices and evidence-based practices overlapped in such a way that a great deal of practical resources, including time and collaboration, are required from all participants to sustain implementation. As mentioned, Fixsen et al. (2005) further complicated the resource difficulties of practical implementation by adding the layers that professionals invested

in, and dedicated to, implementation: “Community leaders, agency directors, supervisors, practitioners, policy makers, funders” (p. 5). Damschroder et al. (2009) also highlighted the difficulties of implementation using the CFIR model that had constructs that covered many similar barriers, including the practical characteristics of the practice, those who are involved, and the process of the implementation itself.

Johnson and Pugach (1990) and Kulinna (2007-2008) investigated barriers to implementation of strategies for behavior management among teachers. Johnson and Pugach surveyed 232 elementary school teachers who rated intervention strategies for working with children with mild intellectual disability and behavior problems. Specific interventions (e.g., isolate the student from the class) were rated and given a rank and a mean score. In a finding that is relevant to the diffusion of innovation that requires collaboration between professionals, the authors found that teachers did not use other teachers as resources for behavior management intervention strategies, although they did use teachers for academic problems. Teachers rated interventions such as sending the student to the principal higher than intervention strategies such as ignoring inappropriate behavior coupled with positive praise or attention. This study drew a direct relationship between understanding the perceptions and beliefs of teachers about EBPs, mentioned by the authors as “those that have support in the literature” (Johnson & Pugach 1990, p. 71), and practical implementation of behavior interventions.

Teacher Preparation

Historically, when the Office of Special Education Programs was still known as the Bureau of Education for the Handicapped, Fink, Glass, and Guskin (1975) surveyed training programs to assess what then were theoretical orientation, teaching methods, and

teacher education. Additionally, they were interested in the training needs that remained unmet. In an overview of their findings, they commented on components of training programs, special materials the programs used, preferred materials, and how the programs used practicums. At that time, 21 of 58 programs that responded considered their program orientation as behavioral in combination with another approach. Of the topics that the programs reported using, four of five were behavioral. The special materials (e.g., videotapes) that the teachers identified as using were on the topics of teaching behavior management or reading. The preferred materials were for parent counseling, classroom control, and "two behavioristic management procedures" (Fink et al., 1975, p. 48). No elaboration was provided for this phrase or the materials that the programs used. The authors concluded that there was a move in teacher preparation away from psychodynamic approaches and a move toward behavior and academic measurement. Finally, in the short discussion of how practicums were used, they found that "few programs place any emphasis on experience in regular classes" (Fink et al., 1975, p. 48).

Several years later, in 1980, Robinson and Swanton looked at the published literature on the generalization of behavioral teacher training from teachers' preservice coursework to their current work as classroom teachers. The authors considered success in teacher education to be generalized change, and they used three criteria to assess this change: (a) number of nontraining conditions in which previous training was demonstrated by the teacher, (b) the type of nontraining conditions that the effects of training were later observed in, and (c) the type of procedure that was used to monitor the teachers' performance in the nontraining condition. Based on these criteria, the authors

concluded that there are "very few studies available that have attempted to establish that behavioral training of teachers results in generalized change" (Robinson & Swanton, 1980, p. 496). The authors also concluded that teachers who generalized their training held a more favorable view of their behavior training than those who did not.

In 2013, Cohen et al. completed a review of the empirical studies of practicums in preservice teacher education. They reported on two approaches in *practicums* and three types of institutional *relationships* that emerged from the practicum descriptions in the articles that they reviewed. The two main approaches to designing practicums were the apprenticeship approach and the personal growth approach. The personal growth approach had a less direct teaching role than the apprenticeship approach. In analyzing the relationships between the host schools and the teacher education programs, the authors found three relationships: (a) the relationships were slanted toward the teacher education program where the mentor teacher supported the teacher education program, (b) relationships that were slanted toward the school, and (c) relationships in which the mentors and preservice teachers discussed tensions between the two institutions and engaged in conversation about the programs.

The analysis of the review led Cohen et al. (2013) to conclude that there were "conflicts and gaps between goals and actions" (p. 373), between the mentors, supervisors, and student teachers, and between the systems involved in the education of the teacher. The implication, according to the authors, was the need for a practicum experience for preservice teachers that included better coordination of goals for the practicum, working closely with teachers, and clearer definitions of the supervisor's role. They added that there was a need for consideration of the education of preservice

teachers in the organization of the school system so that the preservice teacher would be aware of the policies and hierarchy of the school setting.

In 2001, a report on teacher preparation that included subject matter preparation, pedagogical preparation, the amount of student teaching needed, successful polices and strategies for states and universities in preparing teachers, and components of alternative certification programs was completed for the U.S. Department of Education by Wilson, Floden, and Ferrini-Mundy. The authors reported on the variation in the training that teachers receive and in the content of their training programs, including content in behavior management. Wilson et al. made several recommendations, including that practices across institutions should be compared for identification of efficacious practices and the relationship between student outcomes and teacher preparations should be examined. The report appeared to confirm the past (and future) findings of the literature reviews of Fink et al. (1975), Robinson and Swanton (1980), and Cohen et al. (2013) that there was variability in teacher education in all areas reviewed whether theoretical orientation (Fink et al., 1975) or teacher practicums (Cohen et al., 2013).

Alexander, Ayres, and Smith (2015) completed a review of teacher training in EBPs for individuals with ASD. The authors included 23 studies in their review. Studies were evaluated on the basis of the WWC standards for single-case or group-design standards. Only two of the studies met WWC-design quality standards. In total, the authors reviewed studies that included 335 special educators, all of whom were teaching students with ASD. The findings of the authors included that the teachers were often teaching students with a variety of disabilities, not just with ASD. They were not familiar with EBPs such as discrete trial training and naturalistic communication

strategies. In addition, the authors pointed out that without the specialized training that is required for ASD, and in the absence of "favorable student outcomes, teachers are likely to abandon the practice and deem it ineffective" (p. 22). To facilitate implementation, the authors argued, teaching of related skills and learning how to implement practices with fidelity was necessary.

Alexander et al. (2015) discussed the lack of university training and that many training programs do not "train teachers to educate students with ASD to the level of specification needed" (p. 15). They also mentioned the lack of quality in-service training, that more-traditional approaches in behavior management don't work (e.g., stand-alone presentations in behavior management), the need for follow-up training, and value fit of the EBP as "teachers may attempt to adapt the EBP to their setting neglecting core components" (p. 15) of the EBP. The authors concluded that training across all EBPs was needed for educators and that training in groups or through technology should be explored in teacher training.

In a 2012 study, O'Neill and Stephenson completed a survey of 32 teacher training programs in Australia regarding the confidence, preparedness, and models of classroom management with which preservice teachers are familiar. O'Neill and Stephenson reported that these programs in preservice teachers' preparedness to manage problem behaviors were "less than favourable" (p. 1139). They also found that the severity of a behavior was related to teachers' perceptions of preparedness to manage the behavior. Some preservice teachers reported that they felt less prepared for management of aggressive and destructive behaviors than for noncompliance and disorganization. Teacher candidates reported being familiar with behavior strategies, the most frequent of

which was using praise and rewards. PBIS was the most familiar model cited by the teachers for managing behavior. However, simply being familiar with a model did not increase a teacher's feeling of confidence or preparedness in its use. The authors acknowledged that although teacher trainers cannot provide everything to preservice teachers, "stand alone coursework in behaviour management does matter" (p.1141) and that teaching behavior management leads to increased perceptions of preparedness and confidence in teacher candidates. This was particularly true for the management of aggressive, antisocial, and destructive behaviors. The authors also recommended a reduction in the number of models and strategies that are taught and advised concentrating instead on a smaller number of practices that have been proven effective for behavior management.

In summary, teacher preparation in behavior management appears to be inconsistent across studies and reviews. Teachers are not prepared to manage behavior within their classroom, and where they are receiving training, it is often in a more traditional stetting (e.g., stand-alone presentations) that does not effectively promote adoption and implementation of EBPs. Difficulties with implementation of EBPs appeared here in the review of teacher preparation, in barriers to implementation, and in the research-to-practice gap. On the following pages, I will review some of the emerging literature in the relatively new field of implementation science or implementation research.

Implementation Science

Implementation science is, according to Olswang and Prelock (2015), "research that investigates the best ways to ensure that evidence based information is integrated

into practice" (p. S1819). Implementation science or implementation research arose from concerns about the research-to-practice gap. Olswang and Prelock (2015) pointed out that it takes approximately 17 years for research to translate into practice. This long lag time is compounded by the "sources of leakage" (p. S1819), which is similar to the watered-down effect described by Swanwick and Marschark, (2010). In describing implementation science or implementation research, Olswang and Prelock (2015) used Damschroder et al.'s (2009) CFIR as a model for understanding how to best to adopt EBPs in health care, specifically in the area of speech-language pathology. They applied the model to research children with cerebral palsy and identified major barriers to implementing research and practice, including the institutional review board and recruitment of speech pathologists once the approval was received.

Cavanaugh and Swan (2015) combined the literature on implementation science and schoolwide positive behavioral interventions and supports (SWPBIS) over an eight-month period. In the school setting, one of the authors trained SWPBIS coaches while the other author offered additional training (i.e., not coaching) to groups of teachers. Fixsen et al. (2005) had previously identified coaching as one method for successful implementation of a practice, and the authors of this study supported their decision to use coaching for implementation based on the work of Fixsen et al. Cavanaugh and Swan concluded that the training model was feasible, that it was efficient, and that it was relatively low in cost. Importantly, it was also sustainable, and the social-validity measure used by the authors indicated that the trainings "were worth attending" (p. 37) because they improved the trainees' understanding of SWPBIS; it had supported them, school staff, and students; and could be maintained into the future. The sustainability was

confirmed further by the authors as the final stage of the study, included planning for the following school year.

Cane, O'Connor, and Michie (2012) identified a range of factors for implementation of behavior change that they called the theoretical domains framework (TDF). Similar to the work of Damschroder et al. (2009), these authors identified 14 constructs as a method for assessing implementation problems. These constructs were knowledge, skills, social and professional roles, beliefs about capabilities, beliefs about consequences, memory, attention and decision processes, optimism, reinforcement, intentions, goals, environmental, social influences, emotions, and behavioral regulation (Cane et al., 2012). Cane et al.'s model was an additional framework that identified "implementation problems" as well as other possible avenues for intervention development (p. 37).

Subsequently, Justice, Logan, and Damschroder (2015) used the TDF to understand the barriers to caregiver-implemented reading interventions. Justice et al. (2015) identified barriers to the implementation of a caregiver-implemented reading intervention as time related and included difficulties with reading, discomfort with reading, and a lack of awareness of the benefits of reading. For example, reading four times a week was identified as a barrier for the caregivers. Having identified the specific barrier behaviors, the authors then offered several procedures for engaging caregivers in the implementation of a reading program. The techniques that the authors used to increase implementation included having the caregivers record their reading and submit weekly logs. Additionally, caregivers were placed in randomized groups, and other determinants (e.g., there was a feedback group, a reinforcement group, a model group,

and an encouragement group) of the model were applied to the caregivers. The authors then tested these "theoretically informed behavior-change techniques" (p. S1860). This study was not complete at the time of publication, but the preliminary finding of the authors was that "other avenues for improving implementation than those being investigated in the current work will need to be examined" (Justice et al., 2015, p. S1862). That was because of a high attrition rate for the caregivers of the children in the study, because the authors suggested, time was a barrier in the reading implementation plan.

Implementation science is a newly emerging field of study that has several models or frameworks from which to draw (e.g., TDF, CFIR). Nilsen (2015) attempted to make sense of these models and frameworks. To do this, he identified five possible theoretical approaches: process models, determinant frameworks, classic theories, implementation theories, and evaluation frameworks (Nilsen, 2015). Both of the models identified here (i.e., TDF and CFIR) are considered by Nilsen to be determinant models in that they "specify types . . . of determinants . . . which act as enablers or barriers that influence implementation outcomes" (p. 56). Rogers' (2004) theory of diffusion was included by Nilsen under "classic theories." Nilsen pointed out the considerable amount of overlap between the theories and that there is "a current wave of optimism in implementation science" that using these theories may contribute to bridging the research-to-practice gap.

Conclusion

The literature reviewed here is reflective of the difficulties outlined in Chapter 1 in relation to adoption of innovation and diffusion at the individual and organizational levels. The literature supports the need for early adopters to have support from colleagues

and their administrators when adopting an innovation (e.g., Pynoo et al., 2012; Varpio et al., 2012). The literature also revealed the need for increased time, resources, and personal and cultural compatibility with the innovation (e.g., Fixsen et al., 2005; Freeman, 2006). Additionally, the literature revealed the need for increased knowledge for teachers and educators about EBPs as a lack of knowledge of EBPs emerged in several studies (Bambara et al., 2012; Detrich & Lewis, 2012). Relevant to this study is the literature that supports the teachers' choice in implementing the EBP (i.e., Johnson et al., 2014) and the need for collaboration and accountability in the implementation of EBPs (Noell et al., 2005; Reitman et al., 2004). In addition, the theoretical frameworks identified in implementation science are important conceptual frameworks from which I will draw conclusions and implications.

The study that is outlined in Chapter 3 examined the issues of adopting EBPs by using teacher choice, implementation of EBPs through collaboration in a teacher work group format, and building accountability by measuring teacher behavior of implementation of selected EBPs. The study was sustained over a three-month period to increase the likelihood that the EBPs would be maintained once the research study is completed.

Chapter 3

Methods

CHAPTER 3

In Chapter 1, I examined the ongoing investigation of the use of evidence-based behavior interventions (e.g., in the work of Epstein et al., 2008; Fixsen et al., 2005; Wong et al., 2013). The No Child Left Behind Act (NCLB) (2002) raised the expectations of parents and policymakers that outcomes for students in schools would improve (Greenwood, Horner, & Kratochwill, 2008) and created "an unprecedented accountability path" (Amerin-Beardsley, Barnett, & Ganesh, 2013, p. 2). NCLB created the most accountability to date for teachers and school administrators by tying federal regulations to funding for schools (National Center on Educational Outcomes, 2003). This in turn led to an increase in the use of EBPs in many areas, including behavior management, as teachers and school administrators attempted to meet the demands of adequate yearly progress (AYP) using evidence-based practices and curricula (Greenwood et al., 2008; Wong et al., 2013).

Making a reality of positive educational outcomes related to behavior, however, is complicated by how educators view behavior management. Poor classroom management is one of the serious obstacles in teaching effectively. In addition, as far back as the work of Fueyo in 1991, members of the public rated lack of discipline (i.e., behavior management) as one of the main problems in schools. Students with disabilities are especially affected when teachers do not utilize effective behavior management practices. It is estimated that between 12% and 20% of students diagnosed with a disability present with problem behavior that includes physical and verbal aggression, fighting, and disrespect (Flower, McKenna, Bunuan, Muething, & Vega, 2014; Stormont et al., 2005). Furthermore, students who are identified with problem behavior early in their school

careers are more likely to continue to have problem behavior and are more at risk of dropping out (Pidano & Allen, 2014; Reid, Webster-Stratton, & Hammond, 2003; Webster-Stratton, Rinaldi, & Reid, 2011).

Despite the accountability pressure contained in NCLB (2002), there is little cohesive advice for teachers regarding EBPs for disruptive behavior, and the advice that teachers and educators receive can be multitudinous and varied. A search of the U.S. Department of Education website for "policy & behavior management," for example, did not bring up a policy for behavior management in U.S. schools. Rather, there are chapters on how to implement behavior management, with topics dealing with everything from challenging behavior in schools to school policy and leadership style (http://eric.ed.gov/).

Similarly, although there are also discipline regulations in IDEIA (2004) that are designed to safeguard the rights of students with disabilities if the disruptive or challenging behavior is a manifestation of the student's disability, there are no guidelines or advice on how to manage problem behaviors. The discipline regulations in IDEIA deal primarily with the removal of students from schools and classrooms and do not offer direction to teachers on how to manage challenging behavior before it is necessary to remove the student from the school environment. IDEIA (2004) does require that teachers and teams working with students who have problem behaviors consider a functional behavioral assessment (FBA). School teams are required by IDEIA to use positive behavior interventions or other strategies to support the student, particularly if the problem behavior interferes with one's learning (Etscheidt & Clopton, 2008).

Unfortunately, there is considerable research that finds that schools fail to meet the standard of the law and that teachers often do not fully understand the EBPs for

management of children with challenging behavior (Carter & Van Norman, 2010; Freeman & Alkin 2000; Koegel et al., 2012; Stoiber & Gettinger, 2011). Despite the critical need for use of EBPs related to behavior management, research shows that teachers of students with challenging behavior often resort to reactive and punitive strategies to manage the behavior rather than use EBPs (Ducharme & Schecter, 2011; Stormont et al., 2005).

Purpose

As I mentioned in Chapter 1, the focus of this study is on examining the overriding barriers to teachers' accurate, systematic implementation of EBPs in the classroom (i.e., adoption at the individual level and reducing the watered-down effect). The purpose of this study was to investigate an adapted action research process on the adoption of EBPs by teachers and an administrator who were educating students with disruptive behavior. The researcher had anticipated that the study would be useful in answering questions about the social validity of the EBPs chosen by the teachers and their administrator. In addition, it was the purpose of this study to plan for the diffusion of the EBPs chosen by the teachers by creating and using collaborative groups of teachers to address the need for trialability and observable outcomes.

Research Questions

The specific research questions for this study were (a) how, if at all, did collaborative work groups in an action research framework impact teachers' implementation of EBPs with students with disruptive behavior?; and (b) what were the barriers or supports (professional, structural and/or environmental) that prevented or assisted teachers in implementing EBPs in their classroom?

Theoretical Framework

In Chapter 1, I outlined the theoretical framework for this study by using Fullan's (2001) model of leadership and change. Fullan presented a model for change that included a leader who was hopeful, enthusiastic, and energetic, while also was able to bring people together in knowledge and purpose. Relationships are also an important component in this model but are no more or less important than understanding change, making sense of it (i.e., coherence making), and sharing knowledge. In this model, members of a group engaged in creating change are required to have external or internal commitment to the change process; the outcome of these factors coalescing is that "more good things happen, fewer bad things happen" (Fullan, 2001, p. 4).

For this action research study, I took the tenets of Fullan's model described above and combined them within an adapted action research framework. I used Fullan's framework to understand the participation and contributions of educators in a collaborative work group, while also examining their internal and external commitment to the change that they created when implementing EBPs with their target students. Finally, I examined the relationships between the collaborative group members, the members and the researcher, and the members' understanding of change and knowledge sharing as the collaborative process unfolded and the teachers began their implementation of the EBPs.

Method

Participants

Educator participants. I recruited a team of four school personnel who worked with children with challenging or disruptive behavior in a middle school in a large school

district in the American Southwest as participants in the study. I approached, via email, educators in administrative roles (i.e., principals, assistant principals, head teachers) in two large school districts and two independent charter schools within those districts. An assistant principal of special education in the largest school district expressed interest in the study, and permission was secured from the appropriate personnel in the school district's Office of Research. When this approval was secured, the assistant principal was provided with the letter of approval. With assistance from the assistant principal, the teachers were then recruited. I subsequently approached the teachers via email and then in person explained the study and secured written consent.

Participants included three licensed special education teachers and the special education assistant principal, who was a licensed school administrator. It had been my intention to recruit general education teachers also, but this did not occur because no general education teachers agreed to participate. The administrator, (identified herein by the pseudonym Emily) was an educator with experience in special education settings and administration. For the purposes of this study, they will be referred to as Anne, Barbara, and Dawn.

All of the participating teachers had at least one year of teaching experience as special educators. Two of the teachers had been working at the school for two years, and another was in her third year teaching at the school. Two of the teachers were teaching in self-contained classrooms where the students moved between classrooms (including general education classrooms). The third teacher was working as a long-term substitute in a self-contained classroom, where the students moved back and forth between other special education classroom settings but were not included in general education settings.

Midway through the study, the classroom teacher returned and the recruited teacher was reassigned to the administrative role of assistant head teacher, where she assisted with the planning and meetings for individualized education plans (IEPs). She returned to the classroom to implement the EBPs she had been using until the conclusion of the study.

The recruited teachers had experience teaching in inclusion settings and teaching students with disruptive behavior. Anne was assigned to social studies, math, and science. Barbara was teaching language arts, math, and social studies. Dawn taught science, math, language arts, and social studies. Teachers Anne and Barbara also had a daily social communication class period, during which they received weekly assistance from other professionals (e.g., social worker, speech language pathologist).

Within the recruited group (which will be called a *collaborative work group* for this study), there were smaller teams or cases. Anne and Barbara worked together with Student 1, who moved between these teachers' classrooms. Anne also worked alone with Student 2, who was a student in her class. Dawn worked with Student 3. Emily, who was the assistant principal, worked with all participating teachers and students. The three special education teachers and the administrator were included in all of the collaborative work groups of the study.

Specific exclusionary criteria for educators were (a) those who did not have students with disruptive behavior, (b) schools that did not have licensed administrators or licensed special educators with at least one year of teaching experience or (c) schools where there was no administrative interest in involvement in the research study.

All teachers had access to a camera for the Photovoice strategy (Wang & Burns, 1997). Photovoice is a strategy that requires that the participants document, using

photographs, issues that are important to them. The photos became part of the collaborative group work (see below) as the picture takers generated a narrative around the photos.

Students. For this study, the recruited educators targeted the behavior of three male students whose parents provided informed consent for their participation. All of the students targeted by the teachers had been diagnosed with autism. All were in middle school, and for the majority of the day, all were in self-contained special education classrooms. At the time of this study, two of the students were 12, and was 15.. One was Hispanic, and two were White. Two of the students attended classes with their general education peers each day. One student attended physical education and lunch with his peers. One attended PE, lunch, and art with his peers. The other student spent the entire school day in the self-contained classroom.

The disruptive student behavior identified by the teachers varied. Barbara defined the disruptive behavior of her student (i.e., the student whose behavior was also targeted by Anne) as off-topic verbalization that may or may not include clenching of hands and tensing of his body. Anne defined the disruptive behavior of her student as anytime he make noise, hopped or jumped up and down in his seat, flapped his hands, blinked his eyes, or engaged in other body movements with or without vocal noises. Dawn identified the disruptive behavior of out-of-seat behavior and identified it as anytime the student exhibited off-task behavior by walking away from his desk toward the break area where he sat or lay over a ball or a couch.

Setting

Participants included educators and administrators from one elementary school in a metropolitan area of the southwestern United States. The classrooms where the teachers were observed for this study were self-contained special education classrooms housed in a large, general education middle school. One classroom had three students and three adults (one teacher and two teaching assistants) during each observation; one had four students and two or three adults (one teacher and one or two teaching assistants); and the other classroom had six students and five or six adults (one or two teachers and four teaching assistants). All of the collaborative work-group meetings were held in a large room in the administrative offices during times when the teachers were scheduled for class preparation or lunch. Interviews were conducted in the meeting room or in the teachers' classrooms. If the interview was held in a classroom, no students were present.

Research Design

Adapted Action Research Framework.

I used an adapted action research design to study the teachers' use of EBPs with students with disruptive behavior. This research framework has many aspects that made it a good fit for the research questions I proposed. Herr and Anderson (2005) described action research as a framework for research that "shifts its locus of control in varying degrees from . . . researchers to those who traditionally have been called the subjects of research" (p. 2). It has also been called *participatory action research, collaborative action research*, or *community based participatory research,* among other terms (Herr & Anderson, 2005). The action research framework places the researcher and the practitioner at the center of the research in contrast to a more traditional approach to research, which Herr and Anderson described as a "more distanced approach to research"

(2005, p. 3). In a traditional approach, the researcher determines all of the research activities (e.g., the questions, data analysis) whereas in an action research framework, the participants are included in decisions regarding research activities. In this research study, the participants chose what EBPs they would like to use and were subsequently included in the iterative process of confirmation of themes that were generated from the repeated listenings and coding of the interviews. The issue of positionality in the research is central to an action research framework and is important in understanding the role of the researcher in the ongoing action that is the subject of the research (Herr & Anderson, 2005). In this study, the action was in the context of the classroom, and the educators were the practitioners.

Practitioner initiated change. Action research is defined as research that is done "by" or "with" practitioners, not "on" or "to" them (Herr & Anderson, 2005). An additional important aspect of action research is that it is described as an iterative process completed by practitioners who want a change and therefore use action research to initiate the change (Herr & Anderson, 2005). Sometimes, this change is with the help of outsiders (i.e., researchers), and sometimes it is carried out by the practitioner alone (McNiff, 2013).

Cohen, Manion, and Morrison (2011) described action research as a way that teachers and staff can bring about change through research at their own institutions. As such, action research was designed to bridge the gap between research and practice through a combination of "diagnosis, action, and reflection" (Cohen et al., 2011, p. 345). It is about active problem solving, enhancing the skills of practitioners, and is undertaken in classrooms (Cohen et al., 2011).

I designed this study to incorporate this aspect of action research: that participants are an integral part of the process of determining what the change should be and how it should occur. Specifically, following a period of assessment of their target students' behavior, the participants in this study decided what EBPs they would study and implement. Additionally, they (i.e., the participants) were instrumental in deciding how the behavior change plans would be put into action.

Iterative nature of action research process. Cohen et al. (2011) considered action research to be useful for organizational change. This was in keeping with the socio-political intent as described by McNiff (2013), where the action involved movement from the practitioner to policy level (Cohen et al., 2011). Cohen and colleagues (2011) offered a model for the expansion of action research to organizational change that contained four phases: plan, act, observe, and reflect. Following reflection, the cycle could start again, illustrating the iterative nature of action research (Cohen et al., 2011; McNiff, 2013). McNiff, in writing about social science practices, including educational practices, believed that it is necessary to review current practice, identify the part of practice that is in need of improvement, find a way forward, try it, reflect, monitor it, and modify the plan as needed.

The full action research cycle requires the four phases described above, (i.e., plan act, observe, reflect) although the phases do not always have to be in this order. The process of reflection can occur at any time during the process. Acting thoughtfully is a component of the reflection process that is a natural outcome of action research; Cohen et al. (2011) aptly called it "reflection-in action, reflection-on-action or critical reflection" (p. 359).

I designed this study to include the action research cycle by having participants revisit weekly the EBPs they had selected for implementation. This iterative process allowed them to modify their behavior change plans and to monitor the reactions of their students to the implementation of the selected EBP. The research study was considered to be an *adapted* action research framework because of the constraints of time on the iterative process. Typically, an action research project uses multiple cycles of plan, act, observe, and reflect (Cohen et al., 2011). However, given the time constraints involved in working within the school calendar, I was not able to do multiple cycles across the entire school year. Specifically, school personnel were not involved in actually coding data and identifying themes during the qualitative analysis of the data. They were involved in the selection of EBPs, decisions about how behavior change plans were developed and implemented, and in giving feedback on major themes and codes the research identified from the data.

Communication. Clear communication is a key component of action research and accordingly provides for collaborative decision making among the researchers and the research participants. Clear communication also allows for sharing of values and beliefs that drive the research (Cohen et al., 2011; McNiff, 2013). For action research to provide a vehicle of empowerment for teachers, Cohen et al. believed that it should allow for participation at all levels of inquiry, reflective practice, professional development, and a direct way to identify, plan, implement, and evaluate an intervention.

This research proposal focused on improving teachers' current understanding of EBPs and facilitating their empowerment through communication and shared decision making as described by Cohen et al. (2011) and through coherence making as described

by Fullan (2001). It examined why teachers fail to implement EBPs when dealing with disruptive behavior through the cycle of equality in decision making and in action and reflection as outlined by both McNiff (2013) and Cohen et al.

Study phases. Using an adapted action research framework as described above, I adopted a qualitative approach to investigate the research questions posed. The study included several phases and utilized multiple forms of data collection. The school personnel who participated in the research (a) completed presurveys and postsurveys of knowledge of EBPs specifically relevant to school-based interventions (see Appendix A); (b) completed a Social Validity Questionnaire (see Appendix B); (c) completed the Strengths and Difficulties Questionnaire (Goodman, 1997) (SDQ) for the student they worked with (see Appendix C); (d) completed individual interviews before and after the collaborative work group period of the study (See Appendix D for interview questions); (e) participated in collaborative work group sessions that included Photovoice (Wang & Burns, 1997) activities for the initial collaborative group; and (f) measured disruptive behavior of their target students using an individualized antecedent-behavior-consequence process (ABC) (Appendix E). In total, school personnel participated in the study for a three month period from the start of the collaborative work group portion of the research. All of the collaborative work group sessions and final interviews were completed between September 2015 and December 2015.

It had been intended that the Photovoice activity would continue throughout the collaborative work group period, but the teachers did not choose to continue with picture taking following the work group. Therefore, pictures constituted part of the narrative only during the initial collaborative work group session. Not using Photovoice increased the

time for repeat listening and thematic analysis in subsequent collaborative work group sessions.

Educator participants used the list of EBPs that were compiled by Wong et al. (2013) (see Table 1) as a basis for priority decision making during the collaborative work group sessions. These EBPs were considered to be focused intervention methods that were "behavioral, developmental, or educational in nature" (2014, p. 9). The EBPs that emerged from this review were those that could be used to decrease challenging behavior and to increase functional skills, including academic and adaptive skills. During the initial work group, participants met to collectively select the EBPs for study and implementation that they perceived to be cost effective, practical, and deemed by the participants to be a priority for implementation for the students they targeted. The recruited teachers selected three EBPs at the initial meeting. They chose antecedent behavior interventions (ABI), reinforcement, and social narratives. The analysis of the function of the targeted behavior was added to the short list, as the function is essential in generating appropriate behavior plans. This resulted in four EBPs for consideration for the duration of the study (i.e., assessment of function and the three EBPs chosen by the participants). The focus of the research study then became examining the participants' implementation of the EBPs they had selected subsequent to assessing the function of the behavior (see Figure 1).

Procedures

This study used questionnaires; Photovoice documentation at the onset of the study (Wang & Burns, 1997); collaborative work group discussions; direct observation of the teachers in their classrooms; rich descriptions of the school and classroom contexts,

phone calls, and emails for self-reported use of EBPs; and interviews to collect and triangulate data. The initial questionnaires and interviews were followed by Photovoice documentation (Wang & Burns, 1997) and collaborative work group sessions. These groups formed the basis of the intervention for the recruited school personnel. For an overall view of the major activities and data collection procedures, see Appendix G.

Initial questionnaires and rating scales. Several rating scales and survey instruments were used to gather data on the perceptions of teachers about EBPs, how useful they considered the interventions to be, and as a premeasure and postmeasure to illustrate any possible change in the disruptive behavior of the students with special educational needs:

- Each member of the collaborative group completed the SDQ (Goodman, 1997) (see Appendix C), both at the beginning and the end of the research study. The SDQ is a behavioral screening questionnaire. It consists of 25 questions that ask about emotional symptoms, conduct problems, hyperactivity or inattention, peer relationship problems and prosocial behavior. It is a two-page questionnaire designed for teachers of students between the ages of 3 and 16. The SDQ provided a total difficulty score and was used to provide mean scores for the group. Alternatively, the SDQ provides a four-category solution of cutoff scores for each student: close to average, slightly raised, high, and very high scores. The purpose of the SDQ was to measure the change in behavior of target students and to gather qualitative information on the impact of the behavior change of the student, including the impact of change for the student, peers and the teacher. (instead of using ‘1’ and ‘2,’ please use bullets)

One of the teachers used two different students (one initially and a different student at the conclusion of the study) when filling out the SDQ, and this teacher's information was not used in the final analysis. Thus, only two initial and two final SDQ forms were available for final analysis (the administrator did not complete this form).

- Each member of the collaborative work group completed a prior knowledge questionnaire before the initial collaborative work group (see Appendix A). This data provided a qualitative description of the educators' perceived knowledge of EBPs.

Interviews. I conducted individual teacher and administrator interviews following the completion of the questionnaires above and prior to beginning the collaborative work groups (see Appendix D for interview questions). Each interview was recorded for transcription and coding purposes. Interviews varied in length from 25 to 40 minutes. I coded each interview for major themes. I used Nvivo software to analyze the interviews for themes and codes. As part of the iterative nature of action research framework, I discussed the codes and themes as they emerged with participants in the collaborative work group.

Photovoice. At the conclusion of the initial interview, I asked teachers to document their current classroom use of EBPs using Photovoice (Wang & Burns, 1997). Photovoice is a strategy that requires that the participants document, using photos, issues that are important to them. The photos became part of the initial collaborative group work discussion (see below). I explained the Photovoice strategy to the teachers and asked them to identify a behavior strategy they would like to document using Photovoice, one

they wanted to target for change. They subsequently used Photovoice to document the teaching practices or strategies that they used to manage their target student's behavior. It was intended that if the teachers collaborated with a colleague to support one student (i.e., Anne and Barbara), then both teachers would document their use of the practice/strategy independently. It was planned that each teacher would take photos so that she could show them to the group and talk about the success or limitations of the strategy she had photographed. Essentially, the photo acted as a talking point to help expand on the EBP under discussion, while also making it relevant to the teaching practices and classrooms of the educators. However, after the first work group session, the teachers did not continue to take pictures, despite email and verbal reminders. Therefore, it was used only as a strategy for the initial collaborative work group.

Collaborative work group sessions. Collaborative work group sessions were held biweekly from Sept. 14 through Nov. 13, 2015, at the school where the recruited educators worked. After the Nov. 13 group session, an additional and final collaborative work group was held on Dec. 11, 2015. The teacher and administrator participants met with the researcher during these collaborative group sessions. Each session lasted one hour and was held at the school to accommodate the teachers and the administrator. Meetings were held at 1 p.m. when teachers were either scheduled for breaks or for classroom preparation time.

Although each recruited teacher and the administrator committed to attending all of the collaborative work group sessions, in reality, there were some absences from the group. One of the teachers and the administrator were absent for the first group due to illness. I conducted a make-up phone call with the teacher and the administrator five days

following the missed group session using the same agenda and content as the collaborative work group previously held with the teachers. Following this first session, the administrator missed part of the meetings on two other occasions, once stepping in and out of the meeting and once arriving late after missing the first half of the group session.

The purpose of the collaborative work groups was to facilitate discussions about the use and implementation of EBPs. In the first session, group members selected three EBPs (i.e., ABI, reinforcement, and social narratives) for the collaborative group discussions from the list of EBPs of Wong and colleagues (2013) (Table 1). These EBPs formed the basis of the intervention plans the teachers developed for their target students' problem behavior, and in turn, the collaborative work groups formed the basis of the researcher and peer support that the teachers needed to continue to implement the chosen EBPs for the duration of the research study.

My role as the researcher during the collaborative work groups was to generate the agenda, facilitate the discussions about the EBPs, and to assist the educators in the generation of a plan for implementation of the EBPs and to troubleshoot difficulties in the implementation of the EBP. I also served as the observer, data collector, and as a facilitator to reflect back themes and questions to the educators through listening, note taking, and rich descriptions of the groups and topics.

As the researcher, I generated an agenda for each collaborative work group meeting, listing the primary topics, ideas, or implementation strategies that were discussed and related to the management of the behavior of students' behavior. All of the collaborative work groups were audio-recorded. The recordings were not transcribed, but

I took detailed notes and listened to them repeatedly to inform the next steps during the subsequent collaborative group discussions. I used these notes, as well as reflections of my observations of each meeting, to assist in identifying any specific issues that should be addressed in the next meeting and to assist with thematic analysis of the recordings. The agenda for the subsequent collaborative work groups was generated from the topics, discussions, and questions that arose at the prior collaborative group session and as noted as I had listened to the audio recordings. I annotated the agenda and shared it with the group members.

Specifically, I listened to the recordings repeatedly following each group to identify major themes or issues related to EBPs raised by the educators. Many themes emerged from the initial listening exercise as well as questions and issues related to chosen EBPs. As the collaborative work groups proceeded, the initial themes were reduced to a few major themes. During subsequent ongoing collaborative work groups, I presented sections of the recording that reflected those major themes to the group participants to check for reliability (i.e., did the members of the collaborative work group believe that the theme chosen accurately reflected the topic of conversation at the time?). I followed this process of listening, generating themes or specific issues related to the implementation of EBPs, and presenting these as part of the agenda and for consideration by the group following each collaborative work group session.

Initial collaborative work group. During the first collaborative work group, the teachers met for an hour-long work session where I introduced the EBPs for addressing disruptive behavior (Wong et al., 2013) (See Table 1). We discussed the EPBs, and prior to the conclusion of the session, the participants selected a short list of EBPs (i.e., ABI,

reinforcement, and social narratives**)** from the longer list. These EBPs formed the basis of the plans for the amelioration of the disruptive behavior of the students the educators had selected. During the initial group, only two teachers attended, and in order to collect input from the absent teacher and administrator, I provided the list to them by email and asked for their input in the make-up meeting that occurred by phone five days later. During the phone call, they agreed to the EBPs chosen by their colleagues.

The teachers discussed, studied further, and practiced the implementation of the chosen EBPs for the duration of the study (i.e., 10 weeks). The teachers were asked to choose a student and a target behavior following the choice of the EBPs in the initial group. In reality, all of the teachers had a student in mind from the onset of the study. Following the initial group and the selection of the EBPs, consent was secured from the parents of the students whose behavior was the target for change.

After discussion and selection of the EBPs, the group discussion moved to selecting and defining the targeted students' disruptive behavior. Each teacher or smaller team of educators was expected to target the disruptive behavior of at least one student. I am a board certified behavior analyst (BCBA) with years of experience working and consulting in classrooms with students with special educational needs and disruptive behavior. As many of the EBPs were behavior-analytic strategies, I used my knowledge to facilitate the discussion to generate operational definitions of problem behaviors. This process helped the teachers to accurately track students' targeted behavior as they implemented behavior plans that included the selected EBPs. In addition to the agenda of discussion of themes from repeated listening and the Photovoice activity (Wang & Burns, 1997), the initial and ongoing collaborative group activities also served as a case-study

forum for teachers who were attempting to understand and implement EBPs and were having challenges with succeeding in their implementation of these practices.

I asked participants to document their experience in implementing the selected EBPs using the Photovoice technique (Wang & Burns, 1997). Specifically, I asked them to document their experiences with any of the three EBPs that they had identified as areas of priority for implementation. For example, if teachers identified differential reinforcement as a priority area of implementation, they returned to their classroom to document their use, or attempts to use, differential reinforcement (e.g., using tokens, activities, or other tangible reinforcers).

Finally, at the conclusion of this initial group session, I asked the educators to collect data on the disruptive behavior they were targeting and had operationally defined over the next 12 weeks. They were asked to collect ABC data on the behavior and to track the time that the student of interest spent in an inclusion setting. To facilitate understanding of an inclusion setting, the definition was included at the top of Appendix F. For the purposes of this study, teams were asked to collect at least nine ABC incidents prior to the next collaborative work group meeting. I provided specific data collection sheets for this purpose (see Appendices E and F). During the course of the study, all three teachers continued to use the ABC data as a method of measuring the frequency of incidents of the behavior. Two of the teachers used the ABC data and augmented it with additional teacher-designed data collection sheets that allowed them to collect frequency of behavior by class time period. I graphed the data and returned it to the teachers for visual feedback of the success of the implementation of the EBP (i.e., decreasing frequency of disruptive behavior).

Second and third collaborative work groups. In addition to the discussion of themes or issues generated by the researcher from the repeated listening (as outlined above), the function of the students' disruptive behaviors formed part of the group discussion in the second and third collaborative work groups. It was essential for all the student behaviors that the teachers targeted that they establish the function of the student's problem behavior. The function of the behavior (i.e., social/attention, access to tangibles or activities, self-stimulatory, or escape/avoidance) was determined using the ABC charts that the teachers received during the initial collaborative group. Once the function was ascertained, discussion focused on the development of behavior intervention plans (BIPs) that were directly related to the function of the behavior and to finding a possible replacement behavior. The EBPs the participants selected in the first collaborative work group that were relevant to students' BIPs were further defined and explained. For example, Dawn wanted to reinforce longer periods of on-task behavior by reducing out-of-seat behavior. She collected ABC data that appeared to show that the function of the student's behavior was escape/avoid. However, in discussion, it emerged that the behavior may have been maintained by attention because each time the student got out of his seat, someone would go to him, talk to him, remind him that he was working for tokens and dinosaurs, and ask him to return to his seat, which he usually did. Dawn understood the function of escape or avoidance but was not as clear about the maintaining variable of attention. This became clearer to her after discussing the ABC data. As mentioned above, three additional EBPs (i.e., ABI, reinforcement, social narratives) were established for ongoing in-depth discussion in subsequent collaborative work groups.

Subsequent collaborative work groups. In the remaining collaborative groups, the participants used the data they were collecting on their students' disruptive behavior and reflective discussion to better understand the EBPs they had chosen to study and implement. These were the EBPs that the teacher or smaller team applied in classroom settings. The teachers used the collaborative work groups as venues for discussion of the strengths and weaknesses of their application of the interventions and to consider possible changes to the behavior intervention plans. Work groups continued for a total of 12 weeks from the initial work group and were held biweekly for the duration of the research study, with the exception of the final group, which was held following a four-week interval (which included the winter break). Additionally, as mentioned, the repeated listenings (and related researcher notes and observations) formed part of the agenda for each collaborative work group meeting.

Teams' ongoing data collection of disruptive behavior. Each educator who participated in the research project identified a student whose disruptive behavior they were interested in changing. The teachers identified a target student following the initial interview and after the first use of Photovoice. Each teacher collected data on the individual student using individualized data collection sheets (see above). This data collection began after the first collaborative work group session and continued for the duration of the research project. I graphed the data collected by the teachers and returned the data to the teachers by email so they could analyze it visually. These data were collected on the behavior that the educators had identified and defined during the initial collaborative work group session. Teachers analyzed the data for differences in frequency or intensity of occurrence of the disruptive behavior. I collected ABC sheets and the

teacher-designed data collection sheets biweekly at the collaborative work groups, and these data were analyzed on an individual student basis as a mechanism of feedback to the teachers on their implementation of the selected EBPs.

Teacher self-report. One time per week, during the weeks in which no collaborative work groups were scheduled, I contacted the teachers by phone or email to ask about their use of the selected EBPs. Teachers reported on their implementation and frequency of use of EBPs as outlined in their plan for amelioration of the disruptive behavior (see Appendix H). The teachers completed self-reports less frequently than anticipated. Two teachers agreed to phone calls in the first week of the implementation of the EBPs (i.e., following the analysis of function of the behavior). Following these phone calls, I offered to the teachers the choice of email contact when they could not be reached by phone. I emailed self-report forms to the teachers (see Appendix H), which they completed and returned to me via email. In total, during the course of the study, the three classroom teachers completed eight self-report forms by phone or email. The administrator did not complete any of the self-reports (emails or calls).

Observations. I observed each teacher three times during the course of the study in order to independently record their use of EBPs in the classroom and as a means to triangulate the data recorded through their self-reports. My observation focused on each teachers' interaction with the target student whose behavior the teacher had defined and was attempting to modify. I completed the data collection sheets designed for this purpose (See Appendix I). Specifically, I was looking for any occurrence of the target behavior and the teachers' use of an EBP, if it occurred. In the absence of the target behavior, I was looking for the use of EBPs during the course of the lesson I was

observing. For example, Anne used a differential reinforcement procedure as part of her behavior plan for the target student; during observations in her classroom, I observed the use of the differential reinforcement and annotated it on the data collection sheet (i.e., Appendix I) and in the research journal, which included descriptive notes of the classroom context.

Observations varied in length from 25 minutes to a full class period of 45 minutes. Observations were arranged with the teacher at a time that was suitable for the teacher during which the teacher had interactions with the target student. The observation data sheet (see Appendix I) was used for data collection and to assess the procedural fidelity of implementation of the EBPs as selected by the teacher during the collaborative work groups.

Final questionnaires and rating scales. At the final collaborative work group session, I asked the participants to complete the following questionnaire and rating scales again.

- The educators completed a Social Validity Questionnaire that provided information on the social validity of the intervention for the student (see Appendix B).
- Each member of the collaborative group completed a post-knowledge questionnaire (see Appendix A). This was the same questionnaire that was distributed at the beginning of the study but was slightly modified for the conclusion of the research study.
- Each member of the collaborative work group again completed the SDQ (Goodman, 1997) (Appendix C). This was done to determine if educators

perceived any changes in the targeted students' disruptive behavior, including the impact of change for the student, peers, and the teacher. The SDQ was completed as planned by the teachers initially and at the end of the study; however, one of the teachers completed the SDQ forms on different students, which meant it could not be used as a qualitative measurement of the behavior change for one student's behavior.

Interviews. Following the final collaborative work group session, I conducted individual teacher and administrator interviews. Each final interview was recorded for transcription and coding. I used Nvivo software to analyze the interviews for themes and codes. I analyzed and contrasted the themes as codes for the initial and final interviews. All of the final interviews were completed on December 11, 2015, the same day as the final collaborative work group, and varied in length from 15 minutes to 35 minutes.

Data Analysis

Interviews and collaborative work groups. The individual and final interviews with teachers and administrators were recorded and transcribed using a digital audio recorder and Nvivo software. All of the interviews were coded and analyzed for major themes; major themes were generated after the first set of interviews was transcribed and analyzed. Some additional themes were generated following the analysis of the second set of interviews. I used thematic analysis to generate codes and themes from each interview, and the initial and final interviews were analyzed and compared for themes and codes. Each unit of meaning in both initial and final interviews was coded using the software named above.

Each participant interview was coded at the sentence level. For this study, the data analysis was inductive, and no codes or themes were generated prior to the analysis of the initial interviews. Initial codes were generated based on the comments of the participants using an etic focus (i.e., the focus or positionality that I, as the researcher, brought to the study). For example, I generated a code for classroom management in order to accommodate the following comments by participants: "It's very structured in the morning . . . and all the students know what they're supposed to be doing" or "I have a lot of people, it's just hard to explain to them what needs to be done, and then if they don't do it right, I have to kind of stop and help them." In total, 40 codes then were grouped into 10 themes from which three over-arching themes emerged. The final three themes emerged from the combination of the etic focus and iterative process of (a) discussions and confirmation by teachers in the collaborative work groups, (b) repeated listening, and (c) the emergence of patterns between these aspects of the study and the classroom observations.

As mentioned, I audio-recorded all of the collaborative work group sessions. These recordings were not transcribed; instead, I listened to them repeatedly to inform the agenda and next steps for subsequent collaborative group discussions. I took detailed notes as I listened to these audio recordings and included these and any observations of the collaborative work group meetings in my research journal. Following the initial group, I repeatedly listened to identify major themes in the participants' discussions. Following subsequent collaborative work group recordings, the initial themes were condensed to a few major themes. I followed this process of listening, taking notes, generating themes, and presenting the themes for consideration during and following

each collaborative work group session. As part of the adapted action research framework, the codes and themes were discussed with the collaborative work group, as described previously. For example, on Nov. 13, 2015, I presented the theme of attribution (i.e., attribution to the causes of the behavior) to the participants based on the repeated listening of the collaborative work group of Nov. 5, 2015. During the group on Nov. 5, Anne talked about a student she had perceived as needing a weighted vest to stay on task. On Nov. 13, I presented the clip of the comments that I had coded as attribution to the teachers for confirmation, and Anne acknowledged that she does "default to sensory" attribution as a reason for explaining the student behavior. The codes from the repeated listening of the discussions from the collaborative work groups were compared to the major themes that emerged from both the initial and final interview analyses for triangulation of this qualitative data.

Rating scales and survey instruments. Several rating scales and survey instruments were used for data collection of teachers' perceptions of EBPs and the collaborative work group process, student behavior change, and for self-report and observational data of teacher implementation of their selected EBPs.

- Each member of the collaborative group completed the SDQ (Goodman, 1997) at the beginning and end of the research study. Each SDQ was analyzed individually to provide quantitative information on the difference in the students' target behaviors from the beginning to the end of the implementation of the EBP by the teacher. The SDQ provided four categories of scores for each individual student: close to average, slightly raised, high scores, and very high scores, and each student's prescores and postscores can be compared for differences to

assess if they have moved from higher impact category to a lower category (e.g., from very high score to a close to average score). As mentioned above, one of the teachers used two different students (one initially and a different student at the conclusion of the study) when filling out the SDQ and this teacher's information was not used in the final analysis. Thus, only two initial and two final SDQ forms were available for final analysis (the administrator did not complete this form). The data from these two SDQs were totaled, and the prescores and postscores for each student were compared and inspected for improvement following the implementation of the EBPs for the 12-week period. The data comparing the SDQ data is presented in Table 4.

- Each member of the collaborative group completed a prior-knowledge and postknowledge questionnaire (see Appendix A). The questionnaire was distributed at the completion of the collaborative work group portion of the research. The analysis of the responses in these questionnaires provided a qualitative description of the educators' perceived knowledge in EBPs. The qualitative description compared the differences between the initial questionnaire (e.g., I know very little) and the post questionnaire (e.g., I know a lot). The analysis of these data is presented visually in Figure 2.
- Each educator who participated in the research project identified a student whose disruptive behavior they were interested in changing. During the course of this study, the teachers kept ABC data on the frequency of the occurrence of the disruptive behavior. These data were analyzed through the use of individualized ABC data collection sheets and additional teacher-generated data collection

sheets that captured the frequency of the disruptive behavior by class period. This data were analyzed for differences in frequency or intensity of occurrence of the students' target behaviors. The data were analyzed graphically on an individual student basis and were emailed to the teachers twice during the course of the study.

- Teacher self-report: One time per week, during the weeks in which no collaborative work group was held, I contacted the teachers by phone or email to ask them about their use of the EBPs. Only two self-report calls were made because of difficulties with scheduling the teachers. It had been intended that the teachers would be contacted weekly, but they were unavailable for phone calls, and in the weeks when the collaborative work groups were held, they did not complete the forms. As an alternative for gathering these data, I emailed the forms to the teachers (See Appendix H) and asked them to fill them in to report their use of the EBPs. The self-report phone calls and emails provided approximately eight data points during the course of the study. Ultimately, the educators' self-reported data was used qualitatively for comparison and triangulation with the observation data collection forms and repeat listening. It had been this researcher's intention to graph this information for visual feedback, but at the conclusion of the study, not enough data points were available to create graphs. The data is presented in Table 2.
- Observations: Teacher observations were used for triangulation of the data collection with teacher self-reports. Observation in the classroom did not provide data on the behavior of the students. The data collected were reflective of the

work of the teachers. These observations included a thick description of the school and classroom contexts. The observation data were analyzed and compared to the self-report data for procedural fidelity of the implementation of EBPs (see Appendix I). Observations occurred initially on Oct. 16, 2015, after four weeks (Nov. 13) and again on the date of the final collaborative work group (Dec. 11). The shortest observations lasted 25 minutes because of the schedule in which the students are in class for 25 minutes, then the students break for lunch and then return to class for 20 minutes. All other observations were for the full class period of 45 minutes.

Social Validity

The educators completed a Social Validity Questionnaire (Appendix B) that asked about the social validity of the intervention for the student. This questionnaire assessed the teachers' satisfaction with the process for choosing EBPs and with the collaborative work group process for their implementation. The information from the social validity questionnaire was analyzed qualitatively for comparison with themes arising from interviews, from work group discussions and classroom observations. This analysis was used for triangulation with the themes that emerged from listening and observation during the course of the study. The social validity data are presented in Table 5.

Conclusion

In summary, this study was a qualitative study of the work of educators in self-contained classroom settings. This research study adopted an adapted action research framework to examine the teachers' use of EBPs in the management of students with disruptive behavior. It was designed to increase teachers' and an administrators' use of

EBPs through collaboration, Photovoice documentation (Wang & Burns, 1997), data collection of individual student behavior, and implementation of EBPs in the classroom. All of the elements of the methodology initially proposed were used at points during this study. However, not all of the elements were used for the duration of the study. Most notably, the Photovoice strategy and the self-report forms were used less frequently than had been intended at the onset of the study.

Chapter 4

Results

CHAPTER 4

Results

This was a qualitative study that used an adapted action research framework to examine (a) the effects of collaborative work groups on teachers' adoption of EBPs for use with students with disruptive behavior and (b) to investigate the barriers or supports that professionals need that assist or prevent them from implementing EBPs. The study included several phases, and I collected multiple forms of data. I describe below the results of the study activities in which the school personnel participated, in below in the following order:

- Thematic analysis of the initial and final interviews, integrated with the thematic analysis of the repeat listenings of the audio recordings of the collaborative work group sessions.
- Summary and analysis of social validity questionnaires.
- Summary and analysis of observations of teachers and teachers' self-report data.
- Summary and analysis of SDQ scores.
- Summary and analysis of preknowledge and postknowledge questionnaires.

For an overview of these activities and completion dates, see Table 3.

Each participating teacher (Anne, Barbara, Dawn, and Emily) had at least one year of teaching experience as special educators. Anne and Barbara were teaching in self-contained classrooms. Dawn was working as a long-term substitute teacher and was reassigned to an administrative role during the research study where she assisted with the

planning and meetings for IEPs. She returned to the classroom to implement the EBPs she had been using until the conclusion of the study. Emily was the assistant principal.

Each of the teachers was enthusiastic about the research study upon the first meeting. They assisted in the planning of dates and times and made themselves available for meetings and interviews. They presented as organized and eager to learn about EBPs. Anne was a quiet and articulate teacher. She answered interview questions thoughtfully. Barbara was funny and outgoing. She answered questions with trepidation, often saying, "I don't think this is the answer you are looking for." Dawn was quiet and nervous. She was unsure of what to expect during the interview, and that contributed to nervousness on her part. Emily was interviewed in her office and presented as detached from the other teachers. She was unsure of the answers and often offered information that was not obviously relevant to the question I had posed.

Thematic Analysis of Interviews and Collaborative Work Groups

I conducted initial and final interviews with each of the four participant educators. I conducted initial interviews on the first day of the study, and the final interviews were conducted on the day of the last collaborative work group. The time between the initial and final interviews was 12 weeks. I transcribed the interviews and analyzed them using Nvivo software. The results of the coding yielded three major themes: attribution, "winging it," and "it's about me." These themes are defined and described in the following sections. In addition to the interviews, I audio-recorded all of the collaborative work group sessions and listened to them repeatedly throughout the period of the study. I made notes of the repeat listenings, and I generated themes from the recordings that I later included on the meeting agenda for the subsequent collaborative work group

sessions. The themes generated for the collaborative work group agendas and the participants' contributions to them are integrated within the themes from the interviews below.

Theme One: Attribution

The theme of attribution emerged across all of the interviews and across all participants. For the purposes of this study, I defined attribution as any time the participants ascribed a student's disruptive behavior to something (e.g., medication, a sensory need) or someone (e.g., another teacher, the student himself, administrator, EA). Attribution emerged as defined above during the interviews and during the collaborative work groups. Within this theme, participants identified the following as the primary causes for disruptive behavior: the student or the student's diagnosis, other professionals (i.e., other teachers or administrators), and/or the function of the behavior (i.e., escape/avoid, attention, self-stimulatory, access). Following the final interviews, an additional code of positivity was added to the Nvivo analysis. Positivity was defined to capture comments regarding positive attribution made by the participants with regard to behavior plans or behavior change, to the student, or to other professionals.

During the collaborative work groups, the subthemes within attribution (i.e., attribution to the student his diagnosis, other professionals, function of the behavior, positivity) were frequently heard and resulted in my adding the subtheme to the agenda for the subsequent work groups. I included the subthemes in the agenda as part of the iterative process of the research and for confirmation of the themes and subthemes by the participants (e.g., the agenda for Nov.13, 2015, contained talking points about the theme of attribution picked up during the collaborative work group on Oct. 26, 2015). The

subthemes within attribution are presented below. As I mentioned, they were attribution to the student's diagnosis, attribution to other professionals, to the one of the functions of the behavior, or to positivity.

Attribution to the students' diagnosis. Many of the teachers' comments reflected their ideas of how the students' diagnoses influenced their behavior. Attribution to the students' diagnosis was mentioned by all of the participants in the initial and final interviews when participants ascribed student problem behaviors to students' diagnoses. In this study, all of the students had a diagnosis of autism; indeed, this diagnosis was necessary for them to have been placed into the specialized classrooms in which they were taught. Attribution of the problem behavior to the diagnosis was heard in the interviews when the teachers attributed directly to the diagnosis (i.e., autism) or to what they perceived to be a symptom of the autism diagnosis (e.g., communication difficulties, emotional regulation, anxiety, or a sensory need). For example, during the final interview, Barbara talked about anxiety as a part of the student's diagnosis. She said, "So now em children with autism tend to . . . or one of the characteristics is like anxiety." Here, she was direct in her attribution of anxiety to the autism diagnosis. At other times, teachers also attributed behaviors to symptoms of a diagnosis, by including comments that alluded to "executive functioning, "organization," "generic . . . learning disability," or "being an anxious person."

When talking about the students, teachers frequently identified student problem behavior as arising from the students' inability to regulate their emotions; the teachers appeared to believe those emotions were linked to the students' diagnosis of autism. For example, Anne talked about the target student, saying, "He's a very intelligent child . . .

just cannot regulate those emotions." Then she added that she could help him by "just giving him space and time to see how he's gonna feel and how he's gonna voice that to you." Dawn talked about the student not being able to regulate emotions and said, "If they don't want to do something, it just heightens them up." Emily talked about students needing help to calm down and labeled the need to calm as a need for "coping strategies." Finally, Barbara talked about the need for a student to attend PE for regulation, saying, "He needed to like let all of the energy out."

The subtheme of attributing the students' emotions to their diagnosis extended through the interviews and into the collaborative work groups. Anne, when talking about her student during the collaborative work group, also mentioned emotion as a contributing factor to the disruptive behavior. She described how the student had been scolded that morning and that she believed that he was remembering that, which in turn upset him and could have triggered the disruptive behavior.

The emotion most frequently mentioned in the interviews and collaborative work groups as causing a behavior problem was anxiety. Throughout the interviews, collaborative work groups, and in the final interview, Barbara attributed her target student's behavior to anxiety. She mentioned the student's anxiety and her inability to help the student on numerous occasions during the collaborative groups. This teacher's attribution of problem behavior to anxiety started in the initial work group when she was asked to define the behavior, and rather than provide a description of the behavior, she said, "Anxiety, severe anxiety." She described the student as "not rational" and going from "zero to one hundred percentage" when he was anxious.

These descriptions of anxiety were coded in Nvivo as part of the attribution to the student's diagnosis as they were deemed to be internal to the student and conveyed emotion. The comments often also indicated that the teacher could not help (intervene) when the student was anxious. This in turn seemed to create a barrier in implementing the selected EBPs. Barbara, for example, said she did not believe that the EBPs could help her students. For example, in talking about a student she had taught in the past, she said, "Evidence-based practices really didn't *(sic)* help a lot with him." Then she mentioned when talking about the target student who was in the sixth grade, "I kind of have high hopes for [student] without even our help. I think maturity is going to help . . . and just becoming adjusted to this environment," thus, implying that even if she did not implement EBPs, he would improve.

In the smaller teacher team where Barbara and Anne worked with the same student, both attributed his challenging behavior to his anxiety. During the final interviews Anne said, "I don't know if he was already anxious about maybe something that happened previously in the day, if he had homework that day?" Barbara talked about the student's anxiety and said that when he was anxious, she viewed him as "not being able to rationalize" and "he just needs to release it" (i.e., energy) in order to calm down. She talked about the need for the student to engage in exercise so that he could regulate hs anxiety and other emotions. She said:

> Before he could go to PE, I made him do hineys *(sic)* around like a big table for like five minutes because he wouldn't go out for a motor break . . . and once again we were in there alone so he literally did hineys *(sic)* around the table for five

> minutes because he did not want anyone to see him and . . . and I was like, that's fine, and he did it and he calmed down.

Other attribution to the students' diagnoses was expressed with regard to other symptoms of an autism diagnosis. For example, Dawn said, "This student has trouble communicating." Anne talked about one student this way: "I have one who pulls his hair. He just can't get out of that after he's in that mindset. That's where he's at, he's melting down, and it needs to happen." Emily talked about "high-needs classrooms," attributing behavior difficulties to the students she perceived to be in those classrooms. In the final interview, Emily also attributed difficult behavior to the student when she said, "He's very oral, so he likes to chew on things." She continued to attribute the behavior to the student as she described asking him to compare himself to other students. Then, while saying the student could not imitate and behave like other students, she attributed the behavior to him, explaining that he should be able to manage his behavior because he can the fact that he knows it is wrong, but he does not. She said:

> I tell [name] all the time, 'Do do you see other kids biting each other?' He's like no, and then … he's like, 'No, well, I shouldn't have done that' . . . He can verbally tell me why you know what he did wrong and why he shouldn't have done it but still does it.

The attribution to the student diagnosis subtheme ran through the collaborative work groups and interviews. Throughout, the teachers continued to explore the internal emotions of the students as the reason for disruptive behavior, despite taking data in the form of ABCs (see Appendix E) that contributed to an understanding of function and

despite acknowledging in interviews and groups that the function may not, in fact, be sensory, anxiety, or other emotional need.

Attribution to other professionals. Attribution also emerged with regard to other professionals or administrators. This subtheme was defined as anytime the participants mentioned the actions of another professional that they thought contributed in some way to the behavior (disruptive or otherwise) of the student. For this attribution subtheme, comments were coded in Nvivo as the teachers responded to the interview questions about resources (i.e., questions 6 and 7, Appendix D). The subtheme highlighted some of the barriers that the teachers perceived as contributory to their application, or lack thereof, of EBPs. Anne talked about a teacher who "did not have a very structured classroom," which she believed contributed to the behavior difficulties that she (i.e., Anne) was experiencing with the student. In an overlap with the attribution to the student theme, she said,

> The kids were pretty much allowed to do as they pleased during that time, and my kids are a bit higher, and when I had her class come in, they were all a bit lower. So I had no idea how to even remotely help him.

Anne talked about a lack of administrative assistance that she perceived as contributing to the students' demonstrating behavior difficulties. In her comments, she mentioned the lack of administrative support and attributed difficulties in managing challenging behavior to what she perceived as the more general pervasive lack of administrative support for her classroom. She said, "We have a lot of classrooms and a lot of teachers, and so admin get spread pretty thin. . . . My classroom isn't necessarily a high priority." In her final interview, she said, "I think that the biggest issue is support

and being able to get ahold of someone when it is needed to, who is certified to deal with the situation."

Dawn attributed some of her difficulty in managing disruptive behavior to an outside autism team that she said visited the school monthly. She did not gain anything from their visits, she said, and that she believed that she might benefit if "we have them coming in twice a month or even once a month and really working with us or with the students." Her implication was that the autism team was not really working with her or the students, although she did not make clear what they were doing. The attribution, however, was clear. She attributed her behavior management difficulties in part to the resource team because they did not meet a specific need of working directly with her or the students.

Dawn, the teacher who had been substituting in the classroom during the first weeks of the collaborative work group, also attributed some of the re-emergence of her student's disruptive behavior to the classroom teacher who had returned to teaching the class. The behavior plan had been changed by the returning teacher, and she was tentative about how the new plan was going. In the following exchange, she and I were talking about a disruptive behavior that occurred in the classroom during the observation that day:

Dawn: I think it (i.e., the plan) was (i.e., working) cuz he did go back to his seat.

Researcher: He did.

Dawn: He did finish the test.

Researcher: He did.

Dawn: So I think it was different, but it worked.

Researcher: It did. I thought the same thing; once he got the snack, he was attentive again, so he really may have been hungry.

Dawn: Yeah.

Researcher: But he still had no way to tell you that.

Dawn: I'm like, I don't know what this means, especially now that I haven't been in here.

She attributed her last comment about a change in the student's behavior to the fact that she had not been in the classroom to implement the behavior plan that she had devised. Her ambiguity about how it was going in the face of a disruptive incident attributed the occurrence of the incident to the new plan, her absence, and by extension, the other teacher.

Emily was vocal about attribution of behavior to other professionals. During the initial interview, she asked why teachers didn't use EBPs, and she simply said, "I think time, they don't want to take the time." During the final interview, she talked about a schoolwide policy that required the teachers to deal with disruptive behaviors in the classroom rather than seek administrative support. She said, "We've put more ownership back onto the teachers. . . . Before, we would get stupid things up here (i.e., the administrative offices) for a lunch detention. Like he was tapping his pencil or he was chewing gum." Her attribution here was to the other professionals (in this case, both to the general education and special education teachers) as she talked about their inability or unwillingness to manage the behaviors of the student chewing gum or tapping a pencil.

The attribution to other professionals was evident throughout the collaborative work groups. During the collaborative work group of Oct. 26, 2015, Anne attributed a

student's continued difficulty with anxiety to the fact that often the counselor was not available when needed to help either her, Barbara, or the student. When talking in a subsequent collaborative work group about a loud and disruptive student who was given popcorn during class, Dawn said, "I inherited that," in a reference to giving popcorn to the student. She was attributing the poorly thought-out plan, which saw the delivery of popcorn to a disruptive student, to the previous teacher.

In summary, attribution to other professionals was a theme that ran through several interviews and the collaborative work groups. It was at times subtly implied and at other times was abundantly clear in the conversations and discussion of the teachers. It was heard as a descriptive reaction to the lack of support that the teachers perceived they had, often in the face of disruptive behavior that they were attempting to manage.

Attribution to behavior function. I coded attribution to function (i.e., escape/avoid, attention, self-stimulatory, or access) both when the teachers did not appear to clearly understand that they were identifying function and when they did. For example, in a clear attribution to functions of behavior, Anne said in her first interview, "I had a student who would go into complete meltdown mode when he did not want to do something," indicating that she understood the function of the meltdown (i.e., that he wanted to escape or avoid doing what she asked him to do). Later, she added, "So they are gonna be disruptive to get that help or to escape something or to get attention," again indicating that she understood and attributed the behavior to a function (i.e., escape or attention). Attribution to behavior function was heard during initial and final interviews. As the collaborative work groups progressed, it was a recurrent topic. In the initial

interviews, three of the teachers mentioned possible functions for behavior, and in the final interviews, it was coded for two of the teachers.

Teachers Emily and Dawn attributed student disruptive behavior to a function, but it was less clear that they understood the function. Emily talked about a student with disruptive behavior, saying, "When I was teaching, he basically just hated doing classwork." In this example, she was indicating that the disruptive behavior occurred because she was teaching and therefore the behavior could be hypothesized to be an escape/avoidance function for classwork. Similarly, Dawn, when asked what she considered to be disruptive behavior, said, "Having a high pitch tone and yelling, getting up when given like a task and getting up and running around the room." Like Emily, she was attributing the behavior to an escape/avoidance function as the child ran when presented with a task. Later, when talking about the same student, she elaborated on the function:

> So after calendar this is something he does really well if he's given the opportunity to like pass out everything like the notebooks or the marker to the students. But when it comes time for social studies, especially with the News To You, which is what we were about to do, there's a lot of writing involved. So he just shut down and went on the couch and just buried his head.

Here, Dawn was hypothesizing about the function of the "shut down" behavior as escape or avoidance of the writing task.

During the final interview, Emily again talked about function. In response to my question in the exchange below, Emily appeared to understand the need for a FBA and an understanding of the function of the disruptive behavior of chirping and breaking pencils.

However, she continued to recall how the search for a function resulted in a more restrictive placement for the student:

> Researcher: Have you done kind of an analysis of kind of why he's doing it?
>
> Emily: Um, we did, um, an FBA. We've done two on, you know, we review his behavior plans quite frequently.
>
> Researcher: Right.
>
> Emily: The first time, we decided when it was disrupting him in math class, um, cuz he was constantly breaking the pencils and the chirping, and he was just all over the place. We decided it was the class, was too, it was a general ed class. He needed something a little bit more restrictive. We said OK . . . let's move him into special ed math. We moved him into special ed math first period with a male teacher where he reviews his social story for the day every day. . . . Like I said, he can hold it together till about 12:30, then he melts.

During the final collaborative work group, Emily mentioned this same student as the members of the group talked about reinforcement. The group was engaged in a discussion about behavior "getting worse." I reminded them of the definition of reinforcement, that is, an increase in the likelihood in the future of the behavior based on the consequence implemented for the current behavior. Therefore, if the behavior was getting worse, it was likely that they were in fact, reinforcing the behavior, although that was not their intention. During the discussion, Emily realized that the disruptive behavior of chirping could have an escape/avoidance function and that she may in fact have reinforced the behavior by allowing the student to remain in her office for the afternoon.

Anne also mentioned function during the final interview when talking about the student she shared with Barbara. In response to a question about antecedents, she considered several functions for the behavior, saying:

> The other day, it was because he had a hangnail. . . . It can be usually it's homework, so he gets really anxious if he is given homework. It can be if he doesn't know the answer to a problem. He's not getting one-to-one help that he wants all the time. He doesn't want to do anything independently."

Perhaps the most salient comment about function of the behavior came from Anne during the final interview. In the comment below, she acknowledged that she had begun to think about why the student engaged in disruptive behavior. She was asked if there was anything she would do to handle disruptive behavior differently in the future, to which she answered:

> I would take more time to think about, what's causing the behavior? Um, why? Why the disruptive behavior is occurring? Um, I'm, I've been less likely, I've noticed, to resort to, um, sensory options like, 'Go get your weight vest, go get your compression vest, go get headphones, go get a fidget.' Um, I've been less likely to resort to that.

While at times the teachers were correct in identifying the function of some of the behavior as relating to a sensory need, they too often identified sensory as the cause of the behavior. For example, Anne and Barbara routinely identified the behavior of the target students as sensory-based behavior and offered the students time out of the classroom or a lap weight as solutions to the disruptive behavior, even when the ABC data they had collected indicated that the function of the behavior may not have been

sensory (i.e., a self-stimulatory function). On Oct. 19, 2015, Barbara recorded an ABC for her target student that occurred while walking back to her classroom from the social work classroom. The antecedent was recorded as walking; the behavior was recorded as clenching of fists, tensing of body, and off-topic verbalizations. The recorded consequence was that she allowed him to swing in the adapted physical education room, where he complied and relaxed. The duration of the behavior was recorded as 10 minutes. Barbara subsequently described this and other behavior incidents to have a sensory, self-stimulatory function and did not attribute escape/avoidance to the student's behavior during the self-report call or collaborative wok groups.

The discussion of functions emerged in the initial collaborative work group as I had selected it as an EBP in addition to the three chosen by the teachers, and it continued throughout the collaborative work groups. The necessity to link interventions to the function of the behavior required the inclusion of the analysis of function to the list of EBPs. The function of behavior was heard in the collaborative work groups when the discussion included comments such as Dawn saying, "It prevents him from doing the task," where she indicating a possible escape/avoidance function. During the collaborative work group of Oct. 16, 2015, the discussion of function varied from a basic understanding of the function of one student's behavior (e.g., he does it because "it distracts" him from what he is supposed to be doing) to a more considered discussion of function as the teachers talked about the results of the ABC data they had collected. In particular, Dawn was able to assess the function using the ABC data and was clear in her understanding that the function of the behavior was to escape or avoid a task, particularly a writing task. The discussion was extended to a consideration of the maintaining

variables for the behavior (Dawn worked with a student who was often out of his seat, on a ball, or on the couch). Dawn understood the need for a behavior intervention plan that required increased time on task, while also reducing the attention for the behavior once it occurred.

The consideration of the function of the behavior remained a topic for discussion throughout the collaborative work groups. As mentioned, part of the study required that the teachers listen to their own comments from the previous work group in order to confirm themes that were emerging. In doing this listening, the function of the behavior was frequently addressed by the teachers, often in conjunction with attribution. For example, during the collaborative work group of Nov. 13, 2015, Anne listened to her retelling of a behavior incident, and when the recording ended, she said, "I am not getting the function of the behavior because I am tying it back to sensory again."

Finally, the findings regarding function are not complete without considering the *lack* of attribution to function. In a circular way, the lack of attribution to function leads back to the teachers' attribution to other professionals or to a student's diagnosis. The teachers seemed to need to explain why a behavior occurred, and if they did not understand the function, they resorted to other explanations. Barbara routinely discussed behavior without talking about function, or she disregarded function in favor of anxiety as a function. For example, in the collaborative work group of Nov. 5, 2015, after she had completed ABCs of the student behavior that suggested an escape/avoidance function, she continued to believe that the function was self-stimulatory when she said, "It was sensory. He went on the swing and he was OK." Anne also continued to attribute behavior to the student during the collaborative work group on Nov. 13, 2015. She could

not change the reinforcement plan that she was running, she said, because the student had been sick and was on medication. She later added that the student liked to talk about the American Revolution and that she could not stop him, adding, "He gets angry with me." I annotated the lack of attribution to function during many of the repeated listenings for the collaborative work groups, and the significance of the lack of attribution to functions for behavior is discussed further in Chapter 5.

Positivity. The final attribution subtheme was that of positivity. Positivity is defined as positive comments attributed to behavior plans, behavior change, the student, or to other professionals. This subtheme was coded following the final interviews and highlighted some of the changes in how the teachers attributed behavior between the initial and final interviews. I heard positive attribution only during the final interviews. The comments were prompted by a question that asked, "How would you describe the student to your colleague?"

Barbara was very positive in her comments about the student with whom she had worked. She call the student "likeable" and said, "I think people adore him" before adding, "I think that is part of the issue that he is used to getting attention." Even this comment, however, was meant in a positive way as she explained that the student engaged with peers and adults and that he was motivated by social attention. Barbara also spoke positively about her colleagues, who had collaborated with her during the study. She articulated this when talking about her plans for managing disruptive behavior in the future. She wanted to be able to work "as a team" with her colleagues, and her comments about how she would move forward when faced with disruptive behavior sounded positive. She said:

> I want to really start making decisions based on a team effort because our insight is all so different, and I think that if I only make decisions based on my own insight, then I am missing both pieces of the pie, so in the future I just want to make more of a collaborative decision and em make sure that we are kind of all on the same page.

She was hopeful about getting a behavior plan in place as a team and getting it consistent across settings, saying, "I think it is really important to have a collaborative effort."

Anne, in talking about the student she shared with Barbara, was optimistic about how she might handle the behavior in the future. During her final interview, she talked about the student and a recent difficult incident that she had experienced. However, she remained positive, saying:

> That was really difficult because I think just kind of stepping back in the moment, and just kind of analyzing the situation a little bit and just saying what do I need to do. 'What are you doing? What do I need to do to help you?' and then just try to make everything as good as possible so I can I can learn from it, the kid can learn from it, and we can move forward like that.

Anne also positively acknowledged that she had the support she needed (e.g., timers, technology) for implementing visual support with the students, (visual support was one of the EBPs that arose during the collaborative work groups and during the Photovoice exercise.) She added to this acknowledgement by saying, "I think I've learned more of what they (i.e., EBPs) are and how to implement them and how to use them." Anne was also optimistic about the implementation of social narratives and the EBP that she implemented with a student who was not her target student. She reflected on the

implementation of social narratives this way, "[Student] loves his story. . . . You know, he doesn't even pick his nose (i.e., the focus of the social narrative). He just likes to read his picking nose story."

Dawn was positive about the students and the changes she had made during the course of the study. She had worked in collaboration with Barbara to increase a student's time in Barbara's classroom, and this collaboration had gone well, resulting in the student spending more time in the correct setting (i.e., Barbara's classroom). Dawn was optimistic about the changes she had made for the target student, who had engaged in a disruptive incident during my final observation for the study. In reflecting on the incident, she talked about how they had figured out what the student wanted (i.e., snacks) and that they were able to redirect him to his desk and to the task using positive reinforcement. In a contrary way of identifying the positive, she said, "So that was kind of nice that there wasn't like four adults on one child," meaning not as much attention was paid to the disruptive behavior and that it was resolved without the involvement of additional staff.

During the final collaborative work group, each of the teachers was asked about her perception of the process of the research study. The teachers were encouraging about some aspects of the study and less so about others. Anne was hopeful about her newly learned ability to pinpoint EBPs but also said she should like a list of them that she could refer to (the list of EBPs as identified by Wong et al. in 2013 had been provided to the teachers at the onset of the study). She was also was generally positive about her ability to consider the behavior of other students (i.e., not the target student) in light of the EBPs she had learned. She mentioned in particular the social narrative that worked for nose

picking. Dawn also applied her knowledge about the function of behavior to another child (i.e., not the target student) in the classroom, and she advised the teacher who had returned to work that the behavior could have an attention function. She described how she talked to the teacher about the possible attention function. As a result of the discussion, the teacher removed the behavior support person from sitting next to the student, thus reducing the immediate positive reinforcement (in the form of adult attention) for the disruptive behavior. The classroom observation that I completed on Dec. 13, 2015, supported Dawn's use of this intervention as my first annotation during the observation on Dec. 12 as, "The classroom is quiet."

Finally, Emily was positive in her attribution of the competency of her teachers. She talked about how they needed to give themselves more credit for doing a good job and that she had learned a lot about the behaviors in the classrooms and about the EAs. Her perception was that the process had reinforced what she already knew about the teachers, that is, that they were competent teachers.

Theme Two: 'Winging it'

The second theme to emerge in the participant interviews was labeled as "winging it." This theme was defined and coded as anytime the participants talked about managing disruptive behavior in the absence a behavior plan or having to manage disruptive behavior in the moment, as it occurred. The theme of winging it emerged in the collaborative work groups agendas and discussions as well as during the interviews The collaborative work groups became a time when the teachers could discuss the ongoing implementation of the plans for the students' disruptive behaviors. Teachers were expected to collect data for a descriptive assessment of the disruptive behavior. Then,

based on the assessment, it was anticipated that they would implement the EBPs to address the behavior. In effect, it was anticipated that they would have a plan that assisted them in managing the disruptive behavior of their student.

The initial collaborative work group was used as an introduction to the EBPs. The teachers were offered the list of EBPs generated by Wong et al. (2013) (See Table 1.) The teachers did not know what the EBPs were, and they felt unsure of which ones to choose (they were tasked with choosing three). I contributed to their understanding of the EBPs by explaining them to the participants. This lack of initial knowledge appeared to limit their choices to *exercise* and *reinforcement*, perhaps because these were familiar to them. Subsequently, I provided direct teaching and handouts to explain the other EBPs that the teachers chose to use (i.e., ABIs and social narratives).

The teachers talked during the collaborative work groups about how they responded in the moment to the disruptive behavior, even as they implemented the new behavior plans they had generated for the study. For example, as part of the assessment of the function of the behavior, the teachers were tasked with generating an operational definition of the behaviors they had selected to manage. Barbara struggled with writing the definition, and she and Dawn laughed about the definition exercise taking them back to a basic behavior class that they called “Behavior 101.”

The winging it theme was coupled with comments that captured the teachers’ lack of knowledge or experience with EBPs or their misunderstanding of the application of EBPs. These comments constituted a large number of the remarks made by the participants. For example, Anne talked during the initial interview about her experience with a student with disruptive behavior. When asked if she felt that what she had done in

response to the disruptive behavior was the right thing to do, she said, “I felt like I had no idea what other things to do. I felt like I was helping or trying to help. Right now, I know that wasn’t helping.” With this comment, Anne captured the winging it theme: She did what felt she could do in the moment, in the absence of any other plan or policy, coupled with a lack of experience.

The teachers’ lack of plans or a systematic way of dealing with problem behavior emerged in the initial and final interviews. However, there was a qualitative difference in the initial and final interviews of the participants, with most of the teachers blaming themselves during the final interviews if a disruptive behavior had occurred. For example, Anne said, “I guess I was just super flustered just because he had never acted that way with me before.” Anne mentioned that after a disruptive incident, she was able to use an antecedent behavior strategy with the student and that he complied and calmed following the difficult behavior. However, the contribution to the theme remained, as she did not have a plan or a systematic method to manage the behavior.

In the initial interview Anne talked more about her inexperience with managing students with disruptive behavior. She reflected on the impact of her undergraduate education, saying, “I had no idea [i.e., with regard to special education] and my bachelors is in _____ [she mentioned a field unrelated to special education].” She added that she had been in a general education setting for her student teaching so had not had any experiences as a student in managing students with disruptive behavior or special education needs. Later, she added:

> I was not told, you know, how to differentiate or how to, you know, even remotely start to help and care for the kids that had differences. So walking in

from a general ed setting and having my first year teaching being in a special ed setting under an I-license, it was a mess. It was a mess.

In her initial interview, Emily expressed her lack of knowledge of EBPs. She was unable to name or describe any EBP that she had used and relied instead on asking about the other teachers' contributions:

Researcher: So the second question is, 'What are evidence-based practices, and can you describe one or two that you've used'?

Emily: That I've used or that I've seen teachers use?

Researcher: Either one, yeah.

Emily: OK, um, trying to think, great I'm like what did the girls (i.e., the other teachers) say they were using?

When prompted by the researcher that the other teachers had mentioned visual scheduling, Emily said, "A lot of visual scheduling . . . in our autism room and our FSP and ISP classrooms. FSP is functional skills program that we have here." Following this response, she went on to talk about what an FSP classroom is and how visual supports and "behavior supports" are used in such a classroom. When asked about a particular incident and whether she thought she had handled it correctly, Emily said, "No, I am sure I didn't. I am sure I was like 'Oh, my gosh, what is happening'?" That comment implied that no policy or plan was in place to deal with disruptive behavior in these settings.

During her final interview, Emily related another incident indicative of winging it in response to disruptive behavior. She talked about a student who was spending a lot of time in her office due to his disruptive behavior in class. As the administrator, she was helping with his removal from the classroom by having him complete classwork while in

her office. He had already been suspended from school for six days since the beginning of the semester. She said there was no behavior plan for this student, and when asked about how she was managing his behavior, Emily said, "I spend a lot of time coming up with . . . behavior things for him to try or rewards for him to buy into. We spend a lot of time together now." Rather than implement a behavior plan for this student, Emily's long-term plan to manage the disruptive behavior was to request a change of placement for him because "the defiance has gotten to the point where they are like, 'Oh, you're out.'" In the final interview, there was some acknowledgement by Emily that this situation (coming to her office) might be reinforcing for the student. In a comment that exposed her new-found understanding of the application of negative reinforcement to the situation she was in, she said, "A typical day for me now has been . . . babysitting a child all day who's been being kicked out of class all day which I think I said is now becoming a reinforcer of his behavior."

Barbara also said she did not know, or did not have, experience in EBPs and that this resulted in reacting to disruptive behavior rather than using a systematic approach to address it. When asked about the resources she needed, she talked about her desire to have another professional with knowledge of EBPs to help her:

> Barbara: I always feel like every time I'm trying to implement something, I'm creating it myself.
>
> Researcher: Right.
>
> Barbara: Yeah, like fresh. And then I'm saying, 'Hey, I need to twerk *(sic)* this. And then you're putting in the effort to twerk *(sic)* that. . . . And of course even if there was a veteran teacher, you'd have to twerk *(sic)*.

Barbara also expressed her doubt about handling a disruptive incident correctly when she said, "I think I could've handled it better, but I think that'll come with experience, and I'm a relatively new teacher too." Similar to the other participants, she expressed uncertainty when dealing with a disruptive incident while also identifying the need for a more appropriate way to manage the behavior. She said:

> I'm just trying any trick in the book. And he doesn't have like a BIP or anything, so there's no, like, structured way to deal with it. So, I'm just trying the breathing, I tried at one point, I asked him if he wanted a hug.

During her final interview, Barbara appeared reflective of her own practice, and her responses were qualitatively different from those recorded during the initial interview. Whereas in the initial interview, she expressed doubt about her ability to handle a disruptive incident, in the final interview she blamed herself more if she did not provide reinforcement to try to manage behavior more routinely. "On any given day out of the four classes that I teach . . . I would say consistently at least I forget one of those times . . . because I am just like (she made a sound and gestured with her hand over her head) sometimes," she said. This insight did not prevent her from mentioning that she was still sometimes managing behavior by winging it, too. She described a conversation she had with a student during the final interview and said, "I know you have been having a difficult time in (she mentioned the teacher's name) class, so let's go get a movement break . . . so that you could have fun and do your experiment. And he was like, 'OK, yeah, let's do it.'"

Similarly, Dawn identified in her initial interview her lack of knowledge of EBPs with the result that she did not have systematic behavior plans in place. She responded to

a question about resources by saying, “Even just everyone in general knowing what they are (i.e., EBPs) and how to implement them and being properly trained with them. Like reading an article about visual supports isn’t really enough.” Later in the interview, she contributed to the winging it theme with this lengthy explanation of a student’s behavior and her response to it:

> So I kind of just let him calm down and just sit on the couch, but then when everyone was working at the table and reading out loud, he was running around the room. So one of the EAs went to follow him and chase him and kind of tell him to sit down or go to the couch. And he started laughing, and so she kept following him around, so in my eyes this was playtime for the student. So I told the EA to kind of just back off and kind of ignore him running around. But then he started jumping up and doing this like roaring sound, so I gave him his choices of what he needed, and he just kept running and roaring. So he was heading towards the door, so one of the EAs near put up a board kind of, like one of those science project boards up, so he wouldn’t like push her or run out the door, just kind of like a little block, and that heightened him even more, and he just kept punching the box. And at this point, he’s crying and roaring, and all the students are trying to work but looking over at what’s going on. And so after a good five, six minutes, I finally gave him the choices of water and bathroom, and he just pointed to bathroom and calmed down immediately.

The above example of how the behavior was managed contributes to the winging it theme as there was not a plan and because Dawn did not have the knowledge or the experience needed to manage the behavior effectively. She did not allude to the function

of the behavior and did not talk about a behavior plan that she could follow. Ultimately, in the absence of a behavior plan, it appeared that the disruptive behavior might have been inadvertently reinforced.

Dawn was in a more difficult position as she attempted to continue with the ongoing and systematic implementation of the behavior program she had used in the classroom as a substitute teacher. In the final interview, she expressed her frustration with not being able to continue to implement a plan that she believed had been effective. (The classroom teacher she had been subbing for had returned to work.) She talked about how she could see that the teacher was doing things differently from how she had done them in the classroom and said, “When he fell to the floor, I was like, I’m not gonna even acknowledge that cuz normally that’s what he had done a couple of times.” Focusing on her plan that addressed the function of the behavior, which she had assessed to be attention, she said, “We’d just ignore it. There’s one day I just like went over to him, and he just got up and went back to his desk.” Dawn was clear that the plan had worked for her, and that the behavior was less frequent. However, when she returned to the classroom for the purpose of the study, she talked about how the plan had changed and how the classroom teacher was managing the behavior differently. There was no formal plan, and so, in the absence of a plan she, (i.e., Dawn) was winging it.

Dawn mentioned her lack of knowledge and expressed the desire to have another professional with more experience to help her manage the student’s behavior. She professed that she had asked for help, but then she added that the assistance that arrived was not appropriate for her students, and she said:

> I remember when I first started, I had asked for some help because it was my first time teaching . . . and they did give me stuff, and it was more appropriate for like (mentions teacher's name) kids, and my kids were gifted, higher functioning. I can't really give this stuff to them so I had to do a lot of stuff on my own.

Participants' comments during the collaborative work groups also supported the notion that several factors contributed to teachers winging it. During the collaborative work groups, the agenda of Oct. 26, 2015, included presentation of audio clips from the previous collaborative work group. The teachers were asked to reflect on the difference between *knowledge* of EBPs and the *application* of EBPs. This distinction arose initially during the collaborative work group of Oct. 16, 2015. The teachers confirmed that they understood the EBPs that they had chosen and that it was their perception that the application of the EBPs was difficult for them. Anne acknowledged as much during the group on Nov. 13, 2015. The discussion was centered on the stress that the teachers felt in trying to do their jobs, and Barbara was vocal about how she was trying to prioritize all that she had to do. Anne tied the discussion to the application of the EBPs by adding that when she was under stress, there was less active management of behavior, and in her words "application goes out the window," and she resorted to management as the behavior occurred. This lack of application of the EBPs was consistent across all teachers in the stories they shared during interviews and during the collaborative work groups. The lack of application, the misunderstanding of application, or the lack of knowledge of EBPs contributed to the sense that the teachers were reacting in the moment and were not implementing EBPs in a more systematic way--they were winging it.

Summary. The theme winging it emerged from all of the participants in all of the interviews and during the collaborative work groups. At times, the theme was more clearly understood in the context of misapplication of EBPs or in the teachers' professed lack of knowledge and experience with EBP. They said they did not know what to do to prevent the behavior, they did not have enough knowledge or experience, or they did not have a systematic behavior plan. The result was often that they continued with a plan that reinforced inappropriate behavior (e.g., Emily's example of having a student in her office) or that they made references to stress and frustration as they managed the behavior in the moment.

Theme Three: It's About Me

The third theme that emerged was "it's about me." I defined this theme as participants' perceptions of the role played by their own characteristics and their relationships with students in implementing EBSs. The theme captured data that emerged from the interviews and collaborative work groups that reflected not only how the teachers saw themselves but also how that perception affected the implementation of EBPs. In addition, the commitment that the teachers gave to the changes (i.e., the adoption of the EBPs) was reflected in the comments of this theme.

It's about me is further explored through the teachers' stated beliefs that the EBPs would work better if the teachers had a good relationship with their students. All of the teachers saw their personal relationships with students as contributing to the success or failure of reducing disruptive behavior. It is particularly relevant to this study as it underscored the personal barriers or supports that the teachers perceived they needed, or not, as they continued to attempt to implement EBPs.

Anne's initial interview illustrated how her perception of her relationship with students influenced her implementation of EBPs as she talked about a difficult student who was moved into her classroom from another teacher's class. She had already described how the other teacher was responsible for the disruptive behavior of the student because of her (i.e., the other teacher) unstructured classroom (see the subtheme *Attribution to other professionals*). She recalled how the student's behavior worsened as she placed demands on him (e.g., handwriting). She eventually said, "I had no idea what to do" and "I started crying. I had to leave." Then in describing the eventual outcome of the behavior incident, she said that the student apologized, painted a picture for her, and even though she described it as "absolutely traumatizing," she said, "We both needed to have that point where we were pushed, but after that I feel like we had such an understanding for one another." She continued to explore her relationship with this student later in the interview when she said, "I love him to pieces because we had that struggle, but after that we really had no more problems." When asked if she could have handled it differently, she said, "I guess my biggest thing is me handling it so I don't get escalated. . . . I think that is the biggest thing because when we're in the heat of the moment, I'm like, I don't know what to do with you."

In her final interview, Anne voiced some of the same concerns about how to manage behavior, but there was less focus on her personal characteristics or relationship with the student. When talking about a difficult incident with the student that she shared with Barbara, she said, "That was really difficult because I think just kind of stepping back in the moment, and just kind of analyzing the situation a little bit and just saying, 'What do I need to do?'" This comment was noteworthy, as it appeared to mark a change

in the way she perceived the behavior incident between the initial and final interviews and thus reflected a change in her approach; she needed to analyze the situation, rather than rely solely on her relationship with the student to resolve it.

This incident was also interesting because Barbara, who as I mentioned, shared this student, described the same incident during her final interview. Her comments indicated that her choice to use, or not use, EBPs was influenced by how she saw herself as a teacher and by how her relationship with students "works" to manage the behavior. She talked about how she appealed to him during a discussion about the behavior incident.

> We just had a discussion about how like nobody is perfect and how we don't expect him to be perfect, and he . . . says, 'I know that. I (i.e., the student) feel like you guys (i.e., the teachers) are upset with me because I am at such an angry state and I throw if off on you …but I think it is my anger and things like that.'

The analysis of the incident and the student's reaction to it led Barbara to continue to talk about herself and how she managed the disruptive behavior. In the course of the conversation, she included many comments about herself and her analysis of why she found it difficult to routinely implement EBPs. For example, in the following passage, she identified the EBPs that she would not implement, while also identifying her own weaknesses related to organization in the classroom. She also identified herself as "a little ADD" as a way of explaining her inability to routinely offer reinforcers,

> So I mean if something weird is going on or if I just forgot, I'm the type of person that even if I have it written down . . . I can just like blank things like that because . . . I think that sometimes I give priority to teaching . . . so then the other things

> could fall through the cracks without me even noticing. I think I am a little ADD like myself where I can be like I literally just forgot that entire period to not *(sic)* give him a ticket. You know because I did start and . . . I did say, 'OK, well, we are not gonna do these timed intervals. . . . If you can get a four out of five, then I am gonna give everybody a ticket, and if everybody gets a ticket by Thursday, then we can watch a movie.

Later on the same topic, Barbara compared herself to the other teacher who was also working with the student (i.e., Anne). She said that forgetting to use reinforcement was "my biggest hindrance actually, to actually getting something done. Like [Anne] is totally Type A, and when she does something, she does it, you know?"

Barbara continued to refer to others as having a Type A personality in order to contrast herself with them and to explain her method of teaching and classroom management. She talked about the EAs in the classroom, one of whom she also described as Type A. "The one with the brown hair is very, very, I would say, Type A, and so she kinda keeps me in line, and sometimes I forget things, and she picks it up, and she does things." Then she added, "So kind of like a kid, I just need to be held accountable."

Barbara used this contrast again during the collaborative work group on October 16, 2015. During this work group, she talked about how she would change her teaching performance if another person (e.g., this researcher, an administrator) was observing in her classroom. Her lessons were better, she believed, because someone was in her room. Then she contrasted herself with Anne, saying that she (Anne) didn't change, that Anne's teaching remained the same regardless of observations. Barbara was the most vocal about herself and her perception of herself as a teacher. In addition to the comments above, she

described herself as “mundane,” “not compassionate,” and as someone who has a “lot more difficult time” doing something consistently.

By contrast, during her initial and final interviews, Dawn contributed only a few comments to this theme. Despite few personal comments about her personal characteristics, Dawn did offer some thoughts relevant to this theme. For example, during the initial interview, she reflected on her experience as an EA prior to becoming a classroom teacher and said, “When I was first just an EA, I think that was the most I was . . . just experiencing more disruptive behavior, and most of it was not being able to communicate their wants and needs.”

During the final interview, Dawn was reflective on the time she had spent in the classroom as a substitute teacher. She mentioned the EBPs that she had implemented and talked about how she was confused following her most recent visit to the classroom. She talked about how she may have confused the student, and her comment illustrated the difficulty she had in returning to the classroom after the teacher had returned. She said:

> The whole structure had changed when I wasn’t in there, so coming in, everything being different and me trying to get my mind clear on how things are running and then kind of disrupting what [student] had learned to do and what was expected of him, so, um, during the spelling test. . . . I had been doing that (referring to her previous reinforcement plan for in-seat behavior) with [student], and then he would ask for help on how to spell the word.

Dawn’s perception was that if she had been in the classroom, based on her management, the behavior plan would have been different and better for the student as he learned to spell.

Dawn's reticence to talk about herself was also exposed by the few comments attributed to her during the collaborative work groups. However, she did talk about working with another teacher (Barbara) in order to increase a student's time in her classroom. She also talked about how she felt about the workload expectation and she commented, along with the other teachers, excluding the administrator, about how much teachers had to do and how to prioritize all that was expected of them as classroom teachers (e.g., preparation of IEPs, behavior management plans, lesson plans).

Emily talked about her position as an administrator and as a special educator and explained that her teachers were lucky to have someone in the position that she was in because "you don't have to have a special ed background to do this allocation." She considered herself different from many other administrators in similar positions because she was a special educator. When talking about how she related to the teachers, she said, "I always tell them they are lucky that you (meaning the teachers) have someone (i.e., her, Emily) who hasn't been that removed from the classroom, who has a background in special ed, who has the resources to help you." And when talking about her expectation of the teachers, she said, "They have set a very high bar for themselves." Following this comment, she said, "I am not a hard administrator," trying to make it clear that it was not because of her expectations that the teachers were hard on themselves.

Emily also talked about her relationships and her perception of herself as an administrator and the role these played in managing disruptive student behavior. This occurred during the interviews and the collaborative work groups. For example, when talking about a student she worked with during the initial interview, she said, "But I think

as I learned more strategies and more ways to deal with him, I felt like we had a better relationship."

Several times during the study, in the interviews as well as in the collaborative work, Emily talked about the EAs. She mentioned during the final interview that two of the EAs that she supervised did not want to work with a disruptive child because the child had stabbed a substitute (with a pencil). Then she added, "I love my EAs, but they're not trained in behavior management." Emily's commitment to EBPs was demonstrated initially when she consented to allowing the study to proceed at her school with the teachers under her supervision. However, throughout the study, during collaborative work groups, she was not present (e.g., Oct. 16, 2015) or she left the group, only to return later (e.g., Nov. 13, 2015).

Summary. All of the teachers in this study contributed to the theme of it's about me by making statements about their perception of their characteristics as a teacher and their relationships with students. This theme contributed to an understanding of the barriers or supports that the teachers encountered in implementing EBPs. If the teacher's perception was that she was "a little ADD" or she cried or she loved the EAs, then these comments were seen to be about how the teachers' characteristics in some way affected the implementation of EBPs. Additionally, the teachers appeared to perceive that a lack of follow through was because of something outside of their control (the EAs or having ADD), their relationships with other teachers and students notwithstanding. For example, Barbara, the most vocal teacher within this theme, explained her inability to routinely implement reinforcement because of her personal characteristics. She talked about the need to be held accountable by another person, in her case a "Type A" EA. Anne

reflected more on her relationships with students and how she perceived that these relationships would improve if she managed the behavior more effectively. Emily talked more about the management of the teachers and EAs, because that was her role.

Social Validity Questionnaire

At the conclusion of the collaborative work groups, I administered the social validity questionnaire (see Appendix I) to the recruited personnel. The groups were completed in the week that the participants were finishing the semester and the winter break was quickly approaching. Therefore, I provided the social validity questionnaire to the teachers on the day of the final work group. Thus, it did not function as a measure of whether they continued to use the EBPs beyond the collaborative work group process.

In general, all of the teachers appeared to find the collaborative work group experience beneficial. Barbara was the least enthusiastic about the process, but even she agreed that she was satisfied with the process. Emily, the assistant principal, was, in general, the most satisfied. All of the teachers found that the collaborative work groups were difficult with regard to time, coordination, and tasks. Again, Barbara was the least satisfied of the group with these aspects of the process. Anne was the most thoughtful about her participation and was the most receptive to using EBPs in the future.

On the individual level, Emily, the administrator, did not complete all of the questions for the questionnaire because she had mentioned the questions regarding plans were not relevant to her because she did not routinely implement behavior plans. Her feedback on the questionnaire supported the data that emerged from the initial and final interviews. She perceived the collaborative work groups to have been helpful in "being able to hear what behaviors the students were demonstrating in class." This statement was

supported by her refusal to complete the self-report calls because she did not go in the classrooms regularly. On the social validity questionnaire, she wrote in response to the question about what aspects of the collaborative work group process were most useful, "Being able to come up with ideas to help each other." This statement was inconsistent with her own contributions in the groups but perhaps reflected her observations of the other participants as they worked together. During the collaborative work groups, she did not offer ideas for behavior plans during the interviews did she talk about offering ideas.

Overall, Emily did not find the collaborative work group experience difficult at all with regard to time, tasks, or coordination. She was the only participant to mark "not at all difficult" for this question (i.e., Number 9, Appendix I). As the leader of the group, Emily showed external commitment by allowing the study to proceed. She did not show internal commitment after the study began, as evidenced by her absences. She did not contribute to the coherence making or the knowledge sharing, again because of absences and because she did not engage in implementing plans or in helping the teachers to implement plans in their classrooms.

Overall, Dawn was well satisfied with the collaborative work group experience. She said she found the "entire collaborative work group process to be incredibly useful." She also wrote, "Having support from other teachers on how to implement EBPs was very beneficial." She said she found that having an "outside perspective on how I used EBPs" helped with her professional growth. Dawn said she found the collaborative work groups *process* (i.e., time involved, coordination, tasks) "somewhat difficult." No justification was offered for this perception and did not answer on this questionnaire what she had found not useful about the groups. Dawn found it difficult leaving the classroom

when her position as a substitute was over, but she still believed strongly that she would continue to use EBPs in her future teaching (See Table 5). Dawn's comments are consistent with the observations and interview data. She implemented a successful behavior plan for her target student and remained committed to the plan even though she had left the classroom. She applied the knowledge that she gained in working with another student in the classroom. She had both external and internal commitment to the change initiative (Fullan, 2001).

Barbara, as described above, had a difficult time with the reflective listening portion of the collaborative work group process. She had expressed much of her frustration prior to the final collaborative work group, and she was the only teacher, in the final collaborative work group, who was not positive about her experience. She had mentioned job stress several times during the course of the study. She talked in the collaborative work group of Nov. 13, 2015, about how managing the behavior was at the top of her to-do list, only because I was there and she was involved in the study. She later asserted that the implementation of EBPs became a priority for her *because* she agreed to join the study. EBPs were "one of 100 things that she was doing," but other than writing individualized education plans for her students, she did not mention other priorities. This feedback was consistent with the feedback she provided on the social validity questionnaire. She found the groups to be difficult and checked "maybe" for the questions regarding how she would rate her use of EBPs in the future. This was consistent with the observations I completed, where I did not see EBPs routinely used. It was also consistent with the equivocal self-report data that asserted the use of one EBP

that was not observed (i.e., social narratives) and the rejection of another EBP that was observed (i.e., reinforcement).

Barbara found working with her colleagues to be the most useful aspect of the groups. She said that "working with her colleagues to establish a cohesive plan on how to address problem behaviors to be useful." However, of all of the teachers, Barbara had the least coherent plan of intervention for the target student. She did not routinely use the EBPs that she chose-- along with Dawn--during the initial collaborative work group, preferring to use only exercise and social narratives. Her statement of working cohesively with her colleagues was consistent with her final interview when she articulated that she would like to work as a team in managing behavior but was inconsistent with her perception that the collaborative work groups were "difficult," as it is difficult to understand why she would want to work with a team if she found that type of work group process to be "difficult."

Anne, by contrast, was the teacher who most consistently applied the EBPs and who generalized them to other students so as not to be, in her words, "hyper-focused on one student." She was well satisfied with the collaborative work group process and very strongly believed that she would continue to use the EBPs. Anne wrote that she found data collection difficult and that being out of class for meetings was also difficult for her. In response to what was the most useful aspect of the study, she wrote, "It was nice to have an outside perspective on my teaching and self-reflecting. I have learned that I need to take a step back to evaluate the situation before acting and to look at function over sensory first." This statement was consistent with the data that emerged from the initial and final interviews for Anne. Her ability to generalize the EBPs to additional students

and her commitment to the adherence of the EBPs for her target student exemplified both internal and external commitment, as identified by Fullan (2001). Additionally, in her self-reflections during the collaborative work groups, Anne was able to identify when she was misunderstood a function of a behavior (e.g., her comment about "default to sensory"), and in doing so, assisted the other members of the groups with coherence making (Fullan, 2001).

Overall, the social validity questionnaire reflected accurately on the data that emerged from the initial and final interviews and the collaborative work groups. Barbara remained inconsistent and often contradictory in her perceptions and observed actions. Emily was consistent in her lack of engagement, whether in answering questions on forms or in classrooms. Anne and Dawn were consistent in applying the EBPS and in their commitment to the change process. The data from the social validity questionnaire is presented in Table 5.

Observations and Self-report Data by Teacher Participant

As mentioned, when the collaborative work groups began and following the implementation of the chosen EBPs, teachers were contacted to report on their use of EBPs. It was difficult to arrange phone calls with the teachers, and ultimately only two phone calls were completed; one with Anne, one with Barbara. Therefore, I made a decision to email the teachers, requesting that they complete the self-report form on the weeks that there was no collaborative work group. In the weeks that there was a collaborative work group, observations were completed by the researcher, and these observations, along with the audio of the collaborative work groups, served for

triangulation of data for reporting the use of the EBPs. The data reported by the teachers is presented in Table 1.

My observations and journal notes began on Sept. 14, 2015, when I first went to the school to meet the teachers. I did not see the teachers teaching on Sept 14. However, I made notes that the classrooms were organized and tidy and that the teachers were positive and "eager to learn." My initial impressions of the administrator was that she talked about how the teachers complained and that she appeared to be saying that if the teachers were not happy with her or the school in general, they could leave. She appeared to be concerned about the stability of the staff and mentioned twice that they were working in the best school with regard to income for the catchment families. One additional annotation conveyed my impression that the administrator was reactive, not proactive, in how she planned to manage the disruptive behavior in the future.

For the purposes of the presentation of the data linked to observations and to the self-report, each teacher is presented separately with the information about observations and self-report synthesized by teacher.

Teacher Anne. Anne presented as an organized teacher from the initial observation through to the final collaborative work group. She was particularly interested in learning about and using reinforcement, including differential reinforcement. She expressed her desire to help her student stay on task without engaging in the target behavior; in other words, she hoped that she would be able to reduce the incidents to zero the number of behavior incidents. During my initial classroom observation, on Oct. 16, 2015, the teacher used reinforcement during the lesson (e.g., well done), at the end of the lesson (tickets), and on completion of math tasks. For example, she put a Post-it note on

the students' desk, and they were expected to write the answer to a math question on the note. If the answer to the question was correct, the student received an "exit ticket," meaning the student would be given a ticket before they left the math class. All of the students earned an exit ticket during this observation. On the same day, the teacher was observed to use ABI strategies. For example, she consistently used a timer and drew the students' attention to the timer as the time approached for them to finish their assignment.

During the subsequent observation, on Nov. 13, 2015, Anne was again observed to use ABI strategies and reinforcement, including differential reinforcement. By this time, she was implementing a system of differential lowering of the rate of the target behavior (DRL), and if the student had 15 or fewer incidents of the target behavior, the student could access a bonus ticket. Similar to the previous observation, she used a timer to alert her students to the end of a task. She used differential reinforcement for the behavior that she had chosen to target and continued to use the ticket system to reinforce task completion and for the DRL. No incidents of the target behavior were observed.

During the final observation, on Dec. 11, 2015, Anne was observed to use all three of the teacher-chosen EBPs (i.e., ABI, reinforcement, and social narratives). She was observed using the EBPs with the other students in her class. During this observation, she was observed to direct another of her students to his social narrative, referred to as "Picking your nose is gross." The ABI remained the same (i.e., use of a visual timer) and was again accompanied by verbal directions to complete tasks as the time elapsed. Reinforcement was used as before (i.e., tickets), and differential reinforcement was also used for the target behavior. The teacher had worked with the

target student to decrease behavior, and again, no instances of the target behavior were observed during this observation.

The self-reports (See Table 2) submitted by Anne were consistent with the classroom observation forms completed by this researcher on Oct. 16, Nov. 13, and Dec. 11, 2015. On Oct. 23 and Nov. 6, Anne reported using reinforcement with her target student as often as she could. By Dec. 4, 2015, Anne reported using reinforcement every time the behavior occurred, but she reported rarely using social narratives. Over the period outlined in Table 2, she reported using the EBP reinforcement more, recording from "sometimes" to "every time" the behavior occurred. These reports were consistent with the observations I completed. During the final observation, a student (i.e., not the target student) had the social narrative on his desk, and Anne explained how he used it and how it had effectively decreased nose picking. She mentioned the social narrative in the collaborative work group, saying the student no longer picked his nose, and she remarked on how effective the strategy had been.

Finally, Anne remained consistent with her reporting in how often she instructed others to use the EBPs. She reported asking others to use antecedent behavior interventions and reinforcement "often" or "sometimes" for every reporting period. She rarely asked others to use social narratives for all of the reporting periods.

In summary, the observations I completed and the self-reports completed by Anne were consistent. Both showed an increase in the use of EBPs over the course of the study, with one exception: Anne's self-report was not accurate for use of social narratives because the teacher did not report her use with another student; however, it was observed and credited by this researcher. Anne was impressive as a group member who had both

external and internal commitment to the change process (i.e., adopting EBPs), and of the three teachers recruited for the study, she was the teacher at the forefront of the implementation of the EBPs.

Teacher Dawn. My initial meeting with Dawn was not in her classroom. She did not offer a reason for this, but I learned later that she was in a self-contained classroom in which the students did not leave for inclusion in regular education, and therefore the classroom was not quiet during the school day. Our initial meeting for the interview was completed in an empty classroom and in an office. Nonetheless, Dawn appeared organized and somewhat knowledgeable about EBPs. In particular, she was knowledgeable on first meeting about token reinforcement and visual schedules. She embraced the Photovoice activity following our initial meeting and forwarded nine pictures before the first collaborative work group on Oct. 2, 2015.

I completed an observation with Dawn on Oct. 16, 2015. At that time, she still was the substitute teacher for the self-contained class. She planned to target the off-task disruptive behavior of a male student as outlined in Chapter 3. However, it transpired that the male student's behavior was not of concern during this observation, but the behavior of a female student was loud and disruptive and took up a lot of Dawn and her assistants' time. No planned use of reinforcement was observed for either student; rather, reinforcement followed the disruptive behavior of the female student in the form of attention, often from more than one adult. At the end of the lesson, Dawn provided the male student with a dinosaur as a reinforcer, but it was unclear to me how he had earned this reinforcer. Consistent with the self-report, Dawn did not use social narratives.

However, inconsistent with her self-report, she did actively direct the students to a visual schedule at the beginning and the end of the lesson.

For the second observation, on Nov. 13, 2015, Dawn was no longer teaching the class and was in the classroom only for the lesson in order to implement the behavior plan that she had devised and discussed during the collaborative work group. She was observed to actively use a visual schedule with the students. She had changed the reinforcement system for her target student and actively used it to help him remain on task and seated. As a result, he accessed the reinforcer (i.e., the dinosaur) more often. This observation was consistent with the self-report form completed by Dawn, as she reported using reinforcement every time the target behavior occurred.

The third observation resulted in similar findings regarding use of the EBPs and the report by Dawn. She again used visual schedules and a reinforcement system. She did not report using social narratives. The reinforcement system had changed, and because Dawn had been out of the classroom working in another capacity, she was no longer familiar with the system that the classroom teacher was using. During this observation, the target behavior of the student was observed, that is, out-of-seat behavior that included running to a couch where he buried his head and/or falling to the floor. For the first two observations, there was no couch. Between the second and final observation, the couch had been returned to the classroom. For this behavior, Dawn had reported using reinforcement for in-seat behavior every time, but this was inconsistent with the observation I completed on Dec. 11, 2015. Instead, I observed the student engaged in behavior that included falling to the floor, after which he was offered a snack. Dawn reported that clutching his stomach was an indication that he was hungry. I suggested that

giving him a snack following falling to the floor and clutching his stomach was apt to reinforce the behavior and likely to increase the behavior in the future. Although the observation was not consistent with the self-reports, it was consistent with Dawn's report in the collaborative work groups and during her final interview when she expressed frustration about the fact that the plan that she had implemented had changed and that she had not been made aware of the changes.

Dawn completed self-reports on Nov. 2, 2015, and Dec.19, 2015. She completed her substitution in the classroom on Nov 6, 2015, and additional implementation of EBPs with the target child was completed only once weekly until the completion of the study on Dec. 11, 2015. In the self-report forms, she reported using reinforcement every time the behavior occurred. She did not report use of antecedent behavior intervention or social narratives in either of the forms (see Table 2). She reported that she asked others to implement reinforcement as often as she could for the week of Nov. 2, 2015, and omitted a report on implementation by others for the week of Nov. 19, 2015. These self-reports were consistent with classroom observation where she was not observed to actively direct EAs. Journal notes for this observation included that she was more collaborative than directive with the EAs and that the male EA in the classroom was directing more that Dawn.

In summary, the observations I completed and the self-reports completed by Dawn were somewhat consistent with regard to her use of reinforcement. It was difficult to assess her use of reinforcement during the third observation, as she was no longer the primary classroom teacher. In addition, Dawn did not credit herself with the use of ABIs

on the self-report form, and she was clearly using visual schedules (an ABI strategy) during all of the observations for the study.

Teacher Barbara. Barbara's classroom was organized and tidy during our initial conversation on Sept. 14, 2015. No students were present during the initial meeting. However, my impressions of Barbara following the initial observation on Oct. 16, 2015, were different. I made immediate reflection notes that her class was disorganized and that her lesson was confusing. I noted that the handout that she was using on a document camera was crooked and the print was small. I noted that the lesson lacked structure.

The observations with Barbara were not consistent with her reported use of the EBPs of ABI strategies and reinforcement. She was not observed to actively use ABI-based strategies (e.g., visual schedules, social narratives) during her lessons although she reported using ABI strategies every time the behavior occurred. She had a text schedule on a white board that outlined where each student should be during the day, but she did not refer to the schedule during the class. She was observed using reinforcement in the form of tickets at the end of the lesson during the observation on Oct. 2, 2015, but yet, she self-reported that she rarely used the reinforcement. During my second observation, Barbara was again observed using reinforcement at the end of the class, and it appeared that access to the reinforcers was linked to the tickets she had used in the initial observation. She removed a large box from the top of a closet, and the students were allowed to choose from the box. The objects in the box included stickers, pencils, and candy. During the final observation, on Dec. 11, 2015, Barbara told me that she had attempted to use differential reinforcement with the target student and that it had not

worked. It was not observed on Dec. 11, 2015. No other reinforcement system was observed (i.e., no tickets or box was used on this date).

In summary, the self-reports completed by Barbara were inconsistent with the observations of the EBPs. She reported using ABI strategies and rarely using reinforcement. However, ABI strategies were not routinely and actively used during any of the observations, but reinforcement was. Barbara reported using social narratives, but I did not see them during any of the classroom observations. Throughout the study, it was difficult to get consistency from Barbara. For example, during the collaborative work groups, she said she did not use reinforcement and that she did not believe the students should be "reinforced for every little thing." She also acknowledged during the collaborative work groups and the final interview that she was not as organized as she would like to be and that her lessons were better organized than usual because someone was observing. She went on to say that she was prioritizing the use of EBPs and data collection because of my presence in the classroom and that she would not routinely do either "Because if I am in there by myself, I . . . I'm just not gonna do it, but if someone else is there, I will go ahead and do it."

Teacher Emily. Emily was not in a classroom, and therefore, no data were collected with regard to observations or self-reports by Emily. When I asked her to schedule self-report calls, she responded by email, saying she had been sick and that she was busy with other classroom observations. Following the initial email I sent regarding self-report, she did not respond to any other of my requests to arrange a phone call for meeting times. The lack of commitment from Emily both initially and for the self-report

calls was consistent with my initial observations regarding her absence from the collaborative work groups.

Comparison of Pre-SDQ and Post-SDQ scores

At the onset of the study, prior to beginning the collaborative work groups, the teachers were asked to choose a student whose behavior they would like to change. Then they were asked to fill out the SDQ as a measure of the impact of the student's behavior on the teacher. The results of the analysis and a comparison of the scores are outlined in Table 4. filled out the SDQ with the same target student at the beginning and the end of the study. Barbara filled out the SDQ on two different students The SDQ she completed at the beginning of the study was not reflective of the behavior that she subsequently targeted using the EBPs discussed during the collaborative work groups. The second SDQ was reflective of the targeted behavior, and the results are available to view in Table 4. It is unclear why Barbara did this, and an email to her seeking clarification following the completion of the collaborative work group was not answered.

Anne's rating of the target student behavior showed that she perceived the behavior to have improved in four areas: The total difficulties score dropped slightly; the hyperactivity score decreased slightly; and the peer problems score and the prosocial score were slightly improved. However, the overall impact of the student's behavior on the teacher remained very high.

For Dawn, the overall impact score also remained very high, despite dropping by one point. The SDQ results for the target student showed a drop in the hyperactivity score, going from "very high" to "high," probably based on the fact the behavior plan

that she used resulted in more in-seat behavior by the target student. Conversely, the student's peer problems and prosocial scores worsened slightly.

As mentioned, Barbara completed the post SDQ only on the target student. Unlike the other teachers, she reported considerably higher scores for conduct problems and close to average scores for the peer problems score for Student 2. This presented a different profile from the other students and is reflective of the fact that the target student in Barbara's class exhibited age-appropriate language and cognition skills.

Prior-knowledge and Post-knowledge Questionnaires

All of the participants completed the prior-knowledge and post-knowledge questionnaires at the onset and conclusion of the study. Each teacher was asked to provide her degree of knowledge of the behavior principles (e.g., what do you know about reinforcement?) and behavior teaching strategies (e.g., one of the questions was, what do you know about communication as it relates to disruptive behavior?). The sum of the responses showed that the collaborative work group process within which the EBPs were discussed appeared to have increased the teachers' knowledge of behavior principles and strategies. Initially, two of the responses indicated that the teachers knew "very little" about the principles or strategies in the questionnaire, and in the post-knowledge questionnaire, no responses indicated "very little" knowledge of any of the topics in the questionnaire.

Individually, the teachers differed in their knowledge and experience, and this was reflected in the responses on these questionnaires. Emily reported knowing *a lot* or *some* about all of the principles and strategies on the prior-knowledge questionnaire. Upon completion of the post-knowledge questionnaire, she considered her knowledge to

have increased in all areas. Similarly, at the onset of the study, Anne reported knowing a lot or some about all of the areas on the questionnaire, and then at the end of the study on the completion of the post-knowledge questionnaire, she reported that this knowledge had increased (i.e., she rated more of the areas as something that she knew *a lot* about, versus *some*).

Teachers Barbara and Dawn were similar in their responses at the onset of the study. They considered themselves to know *very little, a little,* or *some* about the topics in the questionnaires, with Barbara rating her knowledge as *very little* for two of the areas on the questionnaire (i.e., punishment and changing tasks to change behavior) (see Figure 2). Their post-knowledge questionnaire reflected increased knowledge ratings for reinforcement and interventions for Dawn, while Barbara reported increased knowledge in changing the environment and changing tasks. Neither teacher reported that she knew a lot about any of the topics at either the beginning or the end of study.

Conclusion

Three themes emerged from the qualitative analysis of study data. The themes were attribution, winging it, and it's about me. The subthemes in attribution were (a) attribution to the student's diagnosis; (b) attribution to other professionals; (c) attribution to behavior function; and (d) positive attribution. Positive attribution emerged after the completion of the collaborative work groups. The main finding to emerge from the winging it theme were the teachers' perceptions of their lack of knowledge or experience with disruptive behavior and their lack of systematic application of behavior plans. It's about me contained data that were about the role of personal characteristics and teachers' relationships with the student in the management of behavior. These data were contrasted

and compared with my observations of the teachers in the classrooms and teacher self-reports that were completed during the course of the study.

Additional predata and postdata were examined, including the teachers' perceptions of the social validity of the intervention (i.e., the collaborative work group) and preknowledge and postknowledge questionnaires. The data from the social validity questionnaires aligned with the observations and the data coded through Nvivo. The qualitative data and predata and postdata measures were consistent with observational data supporting the themes that emerged from the Nvivo coding and the social validity data supporting the data that emerged during the interviews and the collaborative work group sessions.

Chapter 5

Discussion

CHAPTER 5

Introduction

This was a qualitative study of the work of educators in self-contained classroom settings in relation to their adoption and use of EBPs to address behavior management. The purpose of this study was to investigate an adapted action research process on the adoption of EBPs by teachers and an administrator who were educating students with disruptive behavior. It was anticipated that the study would be useful in answering questions about the social validity of a collaborative work group process for the implementation of EBPs chosen by the teachers and the administrator. Another purpose of this study was to further identify facilitators and barriers to the implementation of EBPs by the teachers. The specific research questions for this study were: (a) How, if at all, do collaborative work groups in an action research framework impact teachers' implementation of EBPs with students with disruptive behavior? (b) What are the barriers or supports (professional, structural, and/or environmental) that prevent or assist teachers in implementing EBPs in their classroom?

This research study was designed to increase teachers' and an administrator's understanding and use of EBPs through collaboration, Photovoice documentation (Wang & Burns, 1997), data collection of individual student behavior, and implementation of EBPs in the classroom. All of the elements of the methodology initially proposed were used at various times throughout this study. However, not all of the elements were used across the study for the duration of the study, as described in Chapters 3 and 4.

Envisioned Outcomes and Reality

The potential outcomes I envisioned for this research proposal included the recruited teachers using behavior change strategies that are evidence based. I anticipated that the teachers would generalize the strategies to assist in constructing BIPs that address the function of disruptive behavior and therefore would help in identifying replacement behaviors. The potential outcome for the students targeted by the recruited teachers was a reduction of disruptive behavior in the classroom and the subsequent increase in their academic and social participation with their nondisabled peers. The larger and possibly more significant outcome I had hoped for was that the participating school would change policies related to the implementation of behavior change strategies for all children with disruptive behavior, changes that would lead to an increase in instructional time and a decrease in time spent in segregated settings.

I observed the recruited teachers throughout the study as they attempted to implement their chosen EBPs. The reality was that I saw them adopt the EBPs (as defined by Wisdom et al., 2014, as making the decision to use an innovation) and then sometimes implement the practices and sometimes not. Teachers mentioned in the collaborative work groups and noted on the social validity questionnaire that the study processes helped them commit to change (i.e., all said that they wanted to learn more about EBPs so that they could manage disruptive behavior more effectively). They also reported that it helped them in their professional relationships with their peers and in gaining knowledge of the chosen EBPs. These are all factors that affect adoption and implementation of innovation. However, my observations and their comments confirmed that they did not implement the EBPs consistently or they partially implemented the EBPs, leading to the watered-down effect described in prior research.

An analysis of the multiple data sources used in the study showed that the factors that most significantly affected the teachers' adoption and implementation of the EBPs were issues related to (a) user benefits, including value fit and the influence of teachers' beliefs on EBP implementation; (b) teachers' commitment to the adoption and subsequent implementation of the EBP); and (c) the role of the teachers' relationships in the collaborative work group and their relationships with their students. I discuss these factors below. Separately, I will consider the influence of leadership in this study as it relates to both Emily and to my participation in the study.

User Benefit

Most teachers arrive at the school with a sense of moral purpose. Indeed, Fullan (2001) argued, it is the job of a teacher to make good things happen. As part of attempting to make good things happen, the teachers in this study were tasked with using EBPs to decrease the disruptive behavior of the students in their classrooms. In Chapter 1, I looked at the adoption of innovation at the individual level; this included the issues of user benefit, opportunities to practice, and the complexity of the innovation for adoption. I also examined teachers' perceptions of EBP implementation and the watered-down effect that takes place when EBPs are not implemented correctly or consistently. I will examine the same issues here in light of the themes and results that emerged from this study and that were outlined in Chapter 4.

Individual adopters of innovation hold considerable sway over whether an innovation is adopted and implemented. Individuals have the power to stop an innovation before it starts if they do not see that it fits with their individually held values or beliefs (Damschroder et al., 2009; Weiner et al., 2009). This ability to stop innovation is

particularly relevant to teachers in self-contained classrooms because these classrooms are, by their very nature, closed-door affairs (Freeman, 2006). This lack of accountability, arguably, provides teachers with more power to stop the implementation of an innovation if it does not fit with their values. Additionally, the more that individuals see the intervention as aligning with their values, coupled with the way in which leaders communicate meaning about the intervention, the more likely individuals are to use the innovations (Damschroder et al., 2009). In other words, if the innovation is compatible with the individual's values and beliefs and if leaders communicate clearly about the need or use of the innovation, the more successful the implementation will be. Greenhalgh et al. (2005) also underscored this point: that if the innovation has a clear user benefit (e.g., in terms of effectiveness), then the participants will be more likely to use it. In an effort to increase the possibility that the innovations used in this study fit with participants' values and beliefs, at the onset of the study, I asked the recruited participants to choose the EBPs they wished to use. My intention was to have them invested in, and compatible with, the EBPS and therefore be less likely to eschew the EBPs or stop implementing the EBP as the study progressed.

In this study, the power of an individual's perception of the user benefit of an innovation on its implementation is clearly illustrated by Emily. As the leader, Emily committed to the research study and then recruited her teachers to commit to the study. As the leader, she showed enthusiasm and energy for the project in the initial email and phone call (i.e., at the time of initial recruitment). Her level of commitment to the research study and to the process of change, however, was questionable, starting with the first collaborative work group, which she did not attend. Subsequently, as outlined in

Chapter 4, she frequently missed these meetings and did not complete self-report forms. Emily saw the benefit for her teachers and did not stop implementation per se, but she did not seem to see the benefit for herself. Thus, she did not regularly attend the collaborative work groups or implement the EBPs.

Interestingly, once teachers chose the EBPs they wanted to work with, perception of individual user benefit was still not assured. Barbara's participation illustrated additional factors that affected implementation of the EBPs. She was the teacher who seemed least comfortable with the adoption and implementation of the innovation, for whom the EBPs appeared to be least compatible, and who ultimately did not implement EBPs beyond what was already in place in her classroom before the launch of the study. Her beliefs about the causes of problem behavior and her beliefs about herself as a teacher, coupled with a lack of internal commitment, resulted in inconsistent or inaccurate implementation of the EBPs she had selected to use with her student. Below, I will discuss further how beliefs about problem behavior (the ways in which teachers attribute its causes) and about their own personal characteristics affected their adoption and implementation of EBPs.

Personal Beliefs and User Benefit

This study extended the current literature, particularly with regard to the role of attribution in how individuals adopt and implement innovations. Within Fullan's (2001) framework, there is no accounting for the effects, either good or bad, of how individuals attribute meaning. All of the frameworks described in this study (i.e., CFIR; Domitrovich et al., 2008; Fullan, 2001; TDF) mention the importance of the individual or of individual traits as a consideration in the implementation process, whether in health care or

education. However, none examine the degree to which the individuals attribute causes of behavior to another person, to one's disability, to the behavior function, or to other professionals. That is to say, none of the current implementation frameworks use *attribution* as a trait or characteristic of the individuals involved in the implementation of the innovation. Additionally, none of the frameworks consider the effect of attribution at points during the implementation process, particularly as they relate to user benefit. Yet, as demonstrated in this study, how an individual attributes meaning can stop an innovation before it starts or can stop an innovation as it is being implemented, leading to a partial implementation or a watered-down effect of the innovation.

In this study, attribution was a pervasive theme in the interviews and collaborative work group narratives. How participants attributed the causes of problem behavior exerted a powerful influence on whether they actually implemented the EBPs they had selected. For example, the initial difficulties with writing operational definitions of the target behaviors and the choice of EBP were caused in part by the beliefs teachers held about the behaviors they targeted for change. In the case of Barbara, her beliefs (attribution to anxiety) about the target problem behavior appeared throughout the study to be too difficult to overcome and persisted to the final interview. She did not implement EBPs to change her student's behavior because she perceived him to be too anxious about the changes. She stopped the implementation of a reinforcement system for the student because she believed that he reacted with anxiety to the initial attempts that she made to use the reinforcement system. During the final interview, she admitted that she would not use reinforcement intervals for her target student, saying, "I did say OK, well, we are not gonna do these timed intervals." She chose instead to talk to the student in the hope that

explaining that "nobody is perfect and how we don't expect him to be perfect" would be effective in managing the disruptive behavior.

Emily also illustrated how beliefs about causes of behavior affect adoption and implementation of EBPs. This is illustrated in her decision-making about the placement of her target student. She continued to attribute the student's problem behavior to his diagnosis, rather than to one of the functions of behavior during the final collaborative work group and interview. Her belief about the student's behavior influenced her decision to have the student placed in a more restrictive setting. She said, "So [name] said until I get X amount of data to support a change in placement even though he's doing all these things and he has a history of these things . . . we had to move him." Thus, her beliefs about the behavior seemed to result in a decision to move the student to a more restrictive placement rather than to implement one of the EBPs that could have resulted in behavior change.

Teachers Anne and Dawn, in contrast, appeared to change their understandings and beliefs about the causes of problem behavior as the study's collaborative work groups progressed across the semester. Although they also contributed to the intersection of attribution and user benefit, they appeared to benefit from the feedback during reflective listening (i.e., during the collaborative work groups) with regard to attribution. Thus, they were able to effectively implement the EBPs. In many respects, they were the "early adopters" that Rogers (1976, 2004) described as important for initial attempts at the EBPs. However, as the study progressed, it became clear that they, too, continued at times to attribute the ongoing behavior of their students to either the student's diagnosis (Anne) or to other professionals (Dawn). This illustrates that beliefs are incredibly

powerful influences on teachers' behaviors and that sustained effort may be needed to shift beliefs in ways that lead to adopting and maintaining EBPs.

In an effort to better understand the theme of attribution, given its predominance in many of the interviews and collaborative work groups, Fullan's (2001) relationship construct that included a discussion of personal and social competence offers some insight. Under social competence, Goleman (1998) (as cited in Fullan, 2001) outlined empathy, calling it the "awareness of others feelings, needs, and concerns" (p. 72). Perhaps in this case, teachers' attribution of problem behavior to the student, the disability, or to other factors is an overreach into empathy. In an effort to understand the needs of the student, the teachers in this study attributed the needs to "anxiety" or attributed the concerns to "medication." Their empathy, although well intentioned, may have impeded their ability to understand the need for better management of the disruptive behavior through an EBP or for a more functional perspective of the behavior for change.

Using additional constructs from the CFIR (Damschroder et al., 2009) can also help to better understand the role that individual knowledge and beliefs about EBPs play in the adoption and implementation of EBPs. Damschroder et al. (2009) wrote, "the degree to which new behaviors are positively or negatively valued heightens intention to change." They added, "[O]f course, the converse is true as well, often creating a negative source of active or passive resistance" (p. 59). To understand attribution as participants used it in this study is to understand that it was easier for the teachers to accept that a behavior was caused by anxiety or medication than to plan for EBPs and the accompanying need for assessment and data collection. Specifically, for the teachers to adopt and implement an EBP, they needed to perceive that the EBP was effective. Given

the comments of the teachers at the onset of the study, all were comfortable with the general need for EBPs in the management of disruptive behavior. However, this value-fit was quickly called into question, whether because of the need for a behavior definition (e.g., Barbara) or because of behavior function (e.g., Anne's initial attribution of her student's behavior to "sensory needs"). If, as in the case of Anne, mistakes in attributing causes of behavior were corrected (through reflective listening) during the course of the collaborative work groups, then it appeared that the implementation of the EBP proceeded. If, as in the case of Barbara, this was not corrected, then the implementation, or lack thereof, quickly circled back to attribution (in this case, anxiety). This then confirmed for Barbara that (a) the behavior could not be changed because the student was anxious, (b) she could not help him because he was anxious and, (c) she could not apply EBPs because she couldn't change the anxiety.

Teachers' beliefs about causes of problem behavior and their perceptions of the fit between EBPs with their own values are further influenced by their beliefs about their own characteristics. In this study, Barbara, for example, attributed characteristics to herself in an apparent attempt to explain why she did not commit to the implementation of the EBPs (i.e., her description of how she "was a little ADD" or not "Type A" enough). The teachers' argument against implementation of EBPs thus appeared to be that they although they could implement EBPs, they did not implement them because behaviors of students are caused by factors outside of their control or because their own personal characteristics confound the implementation in some way.

Commitment

Fullan (2001) viewed commitment as essential to the change process. According to Fullan, commitment can be internal (intrinsic reward for doing a job well) and external (the policies and procedures that allow the members of the group to do their job well). Fullan wrote that commitment to the change process requires opportunities to practice and that these opportunities to practice (i.e., observability and trialability) can be addressed through study groups and action research.

Teachers' levels of external and internal commitment to a proposed change influence their adoption and subsequent implementation of the new practice. An analysis of this study's findings related to participants' levels of internal and external commitment to the adoption of EBPs illustrate this. Emily, for example, demonstrated external commitment to the change process by inviting me in to complete the study, offering resources (e.g., room and time for meetings) to the teachers to complete the study, and by offering to collaborate with the members of the group during the study. The collaborative work groups functioned as peer support groups and were an opportunity for the leader (Emily) to assist the teachers in knowledge sharing and coherence making.

In reality, however, Emily did not use the collaborative work group sessions as an opportunity to share her commitment to the implementation of EBPs, to collaborate or share knowledge, or to make sense of the implementation of EBPs. Instead, she talked during the collaborative work groups about students with disruptive behavior who should be moved to more restrictive placements. She mentioned one student in particular on whom she had collected data on the disruptive behavior to justify an alternative placement. It is difficult to see how this action is intrinsically rewarding (i.e., to remove a student to a more restrictive placement). However, perhaps it can be further understood in

the context of external commitment. If Emily's commitment was external, that is, to the policies and procedures of the school district, then her commitment was to those policies that allow for up to 10 suspensions for disruptive students and for subsequent removal of the student from the school. Her external commitment to the established school discipline polices in the face of the disruptive behavior was stronger and more powerful than her internal commitment to adopting and implementing EBPs that might have contributed to changes in students' disruptive behaviors.

Barbara also demonstrated that external commitment alone is not sufficient for implementation of EBPs. She showed external commitment to the adoption of EBPs that resulted in her adherence to school policies or procedures. She attended the collaborative work group and attempted implementation because Emily recruited her for the study. However, she did not demonstrate internal commitment to the change process, and this negatively affected her implementation of EBPs in her classroom.

The involvement of Anne and Dawn, in contrast, illustrated that both external and internal commitment are required for effective implementation of an innovation to occur. They demonstrated in several ways that they were committed both internally and externally to the study and to the change process. Both took the opportunity to practice the EBPs with students other than the target students. They were positive in their perception that the EBPs worked for other students and were effective in decreasing problem behaviors in other students. Again by contrast with Barbara, Anne and Dawn were observed using the EBPs (i.e., social narrative, differential reinforcement, ABI) during class and were committed to adoption and implementation of the EBPs.

Damschroder et al.'s (2009) domain of *inner setting* provides more details to help understand Fullan's (2001) constructs of internal and external commitment. Damschroder et al. included *culture* and *implementation climate* of the organization in their domain of inner setting. The authors viewed culture as "relatively stable, socially constructed and subconscious" (p. 58). The authors noted that one of the reasons why innovations fail is because of "less tangible organizational assumptions, thinking, or culture" (p. 58). During the course of the reflective listening activity used in this study, it can be argued that the teachers were asked to listen to their "culture." They were not always comfortable with this listening activity. As noted, Barbara was the most obviously uncomfortable with the reflective listening and feedback that I generated for the agendas for the work groups. At the individual level and the level of commitment to change, Barbara did not fully implement the EBPs. The reflective listening activities challenged the assumptions, thinking, and culture of her classroom (i.e., attribution to a student's diagnosis, her current use of reinforcement, and data collection). By asking her to listen to her own comments in the reflective listening activities, I may have been challenging the less tangible constructs of climate and culture that contributed to her partial or complete lack of implementation of the EBPs.

Damschroder et al. (2009) viewed climate as less stable over time than culture. Climate includes subconstructs of compatibility as mentioned above and additional constructs of (a) tension for change, (b) relative priority, and (c) learning climate. These constructs are relevant to commitment, because they contribute to an understanding of why, or why not, individuals will commit to the adoption and implementation of an innovation. Tension for change was described by the authors as how intolerable the

individuals who will implement the innovation thought the current situation was or their perception of how much change was truly needed. The teachers in this study exemplified this tension. Each of them talked about incidents of difficult behavior that they would have handled differently if they could have. Each perceived a need for changing their use of behavior management practices. The teachers did want to implement EBPs. By this measure, they were ready to learn about, adopt, and implement EBPs.

Damschroder et al. (2009) defined relative priority as the individuals' perception of the priority of implementation of innovation within the organization. This was perhaps where the watered-down effect or partial implementation became a problem for the group of teachers in this study. If, as outlined above, Emily's internal commitment to the change was questionable, then, despite the tension for change that was present, the individual teachers may have perceived that implementation actually was a relatively low priority for the school (i.e., organization). This in turn, may relate to the relatively low commitment of Barbara and at times, Anne and Dawn to the implementation of EBPs. Their perception of the low prioritization the administration gave to the implementation of EBPs could have further influenced the relatively quick attribution they made to other factors when attempting to explain why students engaged in problem behavior. That is, it may have reduced their motivation to change their beliefs about causes of problem behavior, and it is hard to know if attribution was a result of low prioritization for implementation or if low prioritization resulted in greater attribution of behavior problems to factors outside of the teachers' control.

Damschroder et al. (2009) defined the subconstruct of learning climate as the climate that allows the team members to feel "psychologically safe" (p. 59) in learning

about and trying new practices. A positive learning climate also offers time for reflective practice and thinking. Under learning climate, there is time for members to feel valued and mentored. This aspect of implementation is similar to knowledge creation and sharing, as outlined by Fullan (2001).

The importance of a positive learning climate on adoption and implementation of EBPs was illustrated in this study. Throughout the collaborative work group sessions, there was relatively little coherence in knowledge sharing by Emily, the administrative leader. In fact, her lack of knowledge of EBPs was evident from the initial interview. Her internal commitment to the EBPs was not obvious, and she did not commit to observe the teachers to help them implement the EBPs (as evidenced by her lack of commitment to the self-report forms and to her description of not going to the teachers' classrooms because she was too busy). The important influence of Emily, as the assistant principal, combined with her apparent lack of external and internal commitment to implementation of EBPs, may have contributed to the lack of commitment of other participants, particularly Barbara (Ainscow & Sandill, 2010; Sailor & McCart, 2014). The implication of Emily's lack of support for the implementation of EBPs, particularly because she played a leadership role, was an important practical influence on the other teachers (Ainscow & Sandill, 2010). If she had committed to helping the teachers implement the EBPs and if she had created a positive learning climate for adoption and implementation, the other teachers may have shown a greater willingness to sustain their efforts to implement the EBPs.

Barbara was, as I mentioned, the most vocal about her time and participation in the collaborative work groups. She became emotional on two occasions as she shared

with the group her opinions about the implementation of EBPs and how much time and effort the entire initiative was consuming. Her level of commitment was puzzling, though. On one hand, she complained about how difficult and time consuming it was to implement the EBPs. But she also did not report using the EBPs consistently and was not observed using them in her classroom. Unfortunately, she did not use the collaborative work groups as a place to learn and feel safe (i.e., implementation climate). Instead, she used the collaborative work groups as a forum to talk about the difficulty of EBP implementation, and she continued to attribute her student's behavior to his anxiety. Even though she had a forum where she could explore other behavior management strategies, she continued to use strategies that did not address the function of the behavior or even the strategies she had planned to use should the behavior occur.

In summary, the combined effects of internal and external commitment affected the implementation of the EBPs by the teachers in this study. Practically, at the external commitment level, they attended the collaborative work groups. Realistically, two teachers lacked the internal commitment to implement the EBPs, resulting in no application (i.e., Emily) or partial attempts at application (Barbara). Implementation climate and culture played an important role in the EBPs' implementation, including the fact that the leader, Emily, modeled acceptance of attribution to a variety of incorrect causes for the problem behaviors, both in practice and during collaborative work group discussion. The implication of commitment for adoption and implementation of EBPs is twofold. First, the need is for a more sustained practice of EBPs across time. Second, there is a need for a shift in the perceptions of teachers and leaders to a more systematic,

holistic view of adoption and implementation of EBPs, not just adoption and implementation at the individual level.

Relationships

Relationship building is one of the necessary factors for change to occur. Fullan (2001) wrote that the leader of a change initiative must be hopeful, enthusiastic, and have energy in order to build relationships with the group members as part of a successful change process. In this section, I will look particularly at the implications of relationship building as it related to the teachers in their relationships with other teachers and with their students.

Fullan described collaboration as "lateral accountability" (p. 118). Through this lateral accountability, Fullan thought that professionals could motivate each other to continue to contribute and implement ideas, to build relationships, and to commit to the change. For the duration of this study, each participant was one of five members of the collaborative work group (i.e., there were three other participants and me in the group). The key relationship findings of this study centered around self-efficacy as teachers attempted implementation of EBPs and around resistance once the EBPs had been adopted for implementation.

Self-efficacy

Damschroder et al.'s (2009) CFIR framework again helps in understanding the role of relationships in assuring adoption and implementation of new practices, specifically through the *characteristics of individuals* domain. In this domain, Damschroder et al. (2009) included self-efficacy (i.e., the individual's belief in their own ability to implement change), individual stage of change (i.e., the individual's ability to

move to sustained use of the new practice), individual identification with the organization (i.e., the individual's degree of commitment to the organization), and "other personal attributes" (p. 59) as subconstructs within the individual domain.

The teachers in this study exemplify how self-efficacy and resistance influence the process of implementing a new practice. Barbara's self-efficacy, that is, her belief that she could implement EBPs, was questionable from the initial stage of the study. Her attribution to her own characteristics (e.g., ADD) and her remarks about needing someone to hold her accountable point to a teacher who was not confident in her ability to implement change. Additionally, resistance from Barbara (see below) affected her compatibility with the implementation of the EBP. This ultimately affected her relationship with her students because without the EBP implementation, she continued to attribute the student's problem behavior to his diagnosis. In continuing to attribute the behavior to anxiety, she was more likely to resort to what she saw as her connection (relationship) with the student to try to manage the behavior.

Anne, by contrast, was less likely to attribute the problem behavior to her student's diagnosis and was more likely to overly attribute to "sensory needs." When she learned about how to assess the function of the behavior, she was able to reassess her relationship with the student, particularly as it related to behavior management. Her comments during the final interview described how she would be more likely to stand back and analyze the situation, as compared to her initial description of how she handled the behavior that included sitting on the floor and crying with the student. By the time of the final interview, she saw her role as more of a trained observer when a behavior incident occurred, rather than as a participant in the behavior incident. On a practical

level, this allowed her to decrease incorrect attribution to "sensory needs" and more accurately assess the function for the problem behavior and follow through with an EBP that would reduce the problem behavior.

Returning to the relationship roles of the teachers and the leader, an important finding from the study links commitment and relationships. As mentioned, Emily did not appear committed to the change process. Her lack of commitment appeared to have contributed to "disequilibrium" (Fullan, 2001, p. 116) in relationships among the group members. Barbara did not commit to the implementation of the EBPs because of the lack of value-fit and her inaccurate attribution, lack of internal commitment, and in part because of the lack of strong relationship building by the leader. Anne and Dawn, by contrast, implemented the EBPs successfully, but in the absence of strong leadership and commitment to the change process, it is unlikely that systematic (schoolwide) change in implementation of EBPs would occur. The role and influence of leadership is examined more below in light of the leadership roles within this research study.

Resistance

Fullan (2001) pointed out that relationships "are not ends in themselves" (p. 65). Collaborative relationships, he cautioned, must focus on the "right things otherwise they "may end up being powerfully wrong" (p. 67). Fullan argued that getting the views of resisters or dissenters to a planned innovation was needed in the change process so that collaborative relationships could be built. He described individuals who are resisters to change in this way: "In the culture of change, emotions run high. And when they do, they often represent differences of opinion" (p. 74). He included resistance in his analysis of relationships because leaders in these relationships must possess what he considers to be

emotional intelligence so that they can develop peer and collaborative relationships that will help produce beneficial outcomes for the organization.

In the culture of change, moving beyond resistance is identified as an overall positive aspect for both relationships and the change initiative. Barbara illustrates this well. I identified her as a resister because her emotions ran high when she was talking during the collaborative work groups of Nov. 13 and Dec. 11, and she did not implement the EBPs. She cried during a conversation with me when identifying her stress in attempting to implement EBPs. She exemplified Fullan's external commitment (i.e., she was engaged in the study because of outside polices or processes), but she did not satisfy the internal commitment identified as necessary for group members in the change initiative. For internal commitment, Fullan believes that one must have internal drive "because getting a job done is intrinsically rewarding" (p. 8). Barbara did not talk about how her job as a teacher was rewarding; instead, she talked about how difficult she found it and about the stress that she felt because of the demands of the job. Yet, the resistance from Barbara was informative. It pointed to the need for more time for the collaborative work group process so that relationships, including those fraught with resistance, could be resolved to the benefit of the adoption and implementation of the innovation. In the context of this study, the majority of resistance from Barbara occurred on the last day of the study and so, moving beyond the resistance for the benefit of relationships, as Fullan (2001) suggested, was not possible.

Leadership

Fullan (2001) envisioned leaders as individuals with enthusiasm, hope, and energy. These characteristics are necessary in part because change is "hard, labor

intensive work" (p. 44). Fullan's (2001) belief was that the leader in the process of change had a role in managing the unsettling that occurs with change and in finding the "best route to greater all-round coherence" (p. 116). Fullan (2001) described the disequilibrium that change brings. His model focused on the leader coming to terms with the new processes or outcomes of the change. Fullan believed that "unsettling processes provide the best route to greater all-round coherence" (p. 116), and in the process of coherence making, the leader must anticipate chaos or a disturbance of the status quo. According to Fullan, it is part of the mantle of the leader to anticipate unsettling of the status quo and to plan for resettling once the change has occurred.

To understand how to assess the qualities of the leader in accomplishing this task, Fullan cited "lateral accountability" (p. 118). As mentioned, lateral accountability is the collaboration between group members. The expression brings to mind the useful collaboration that would be expected between group members as they work together as equals to implement changes. Through this accountability, Fullan thought that leaders could motivate group members and members could motivate leaders. In this cross-pollination fashion, all members of the group can contribute to change, build relationships, and share in the commitment to the new process.

The current research project illustrates how a lack of this type of accountability can influence adoption and implementation of EBPs. Emily was the leader of the group for the purposes of this study. She was the administrative leader, as well as the instructional leader for the group of recruited teachers. However, aspects of her participation in the collaborative work group indicated that she did not lead in a way that is described by Fullan (2001). In the initial weeks of the study, her absences contributed

to the lack of lateral accountability because without her presence, she could not be accountable. In the following weeks, she did not complete the self-report forms and admitted via email that she had not seen the teachers in their classrooms, again reducing accountability for both teachers and leader. This lack of lateral accountability appeared to affect the other group members' commitment and thus the implementation of the EBPs.

Fullan's (2001) framework requires that the leader use all of the factors of the leadership-for-change model (i.e., moral purpose, understanding change, coherence making, relationship building, and knowledge creation and sharing). Emily talked about relationships with her teachers and EAs, but building relationships did not appear to be accompanied by other factors relevant to a successful change initiative, particularly, understanding the change, knowledge sharing, or coherence making. In this study, it was difficult for Emily to understand the change and to make sense of the change without participating with the teachers at the classroom level because without being there, she would not see the process as it unfolded.

In the absence of Emily, I became the leader who shared knowledge and tried to make the change coherent for the teachers. Positioning myself as the leader was an important shift in my perception of the change process. On reflection, Barbara, who was upset about the changes that EBPs required and who identified as resisting the change process, can be viewed as reacting to the changes with me, rather than Emily, as the leader. She took opportunities to practice her chosen EBPs in my presence (i.e., when I was in her classroom). She acknowledged later, in conversations and on the social validity questionnaire, that she did not believe she would not continue using EBPs beyond the completion of the study. This can be understood in part because of the

temporary shift in leadership, that is, once I was finished with the research observations, there would be no lateral accountability.

Fullan (2001) considered dissenters or resisters (i.e., those not fully willing to engage in change) to be crucial to the process. The leader's role is to guide through dissention and to inform the resister through knowledge creation and sharing. As the short-lived leader to the collaborative work group, it became my role to create and share knowledge and to make sense of the change (i.e., understanding change and coherence making). Emily retained the other factors as a leader (moral, purpose, relationship building, and understanding change). This breakup of leadership factors is mentioned here to explain the resistance that I perceived with Barbara and to further explain a conversation that I had with her near the end of the research study.

Prior to the final collaborative work group and subsequent to the final observation in Barbara's classroom, she demonstrated her resistance to the change process when she provided me with less than positive feedback on my participation in the study and how she felt I had handled the procedures in the study. When Barbara's feedback is considered in light of her personal story of her perceived job stress and priorities as a teacher, it offers insight into the change process at the level of the individual adopter. She considered the job she held as difficult and talked in the collaborative work group on Nov. 13, 2015 about how managing the behavior was "one of 100 things" that she was doing. She was "doing it (i.e., implementation of EBPs) and seeing results," but she also said "until we make it a priority, it is not a priority." She asserted that the implementation of EBPs was not a priority for her until she agreed to join the study. Once in the study, she found the data collection and the implementation of EBPs stressful. This stress

culminated on the last day of the study when she talked with me for about 20 minutes about the study and my part in the process. Her frustration was evident in her responses on the social validity form regarding the collaborative work group. She was the only teacher, in the final collaborative work group, who was less than positive about her experience.

As the temporary leader, I was bringing EBPs that were relatively new, complex, and at least for Barbara, incompatible with her teaching and classroom management practices. This incompatibility resulted in her conclusion that because she was a little ADD or needed to be held accountable by another person to implement a new practice, that she was not a teacher who could adopt and implement EBPs. In considering Barbara in light of the theoretical frameworks on change, she needed more time, more collaboration, and was possibly someone who would benefit from more direct instruction in the use of modeling of the EBPs in her classroom if she was to be a successful adopter/implementer of an innovation. Additional supports for implementation (e.g., writing of social narratives) may also be helpful for teachers who have difficulty with the implementation of EBPs.

By contrast, Anne and Dawn were more prepared to adopt the EBPs and to implement them in a way that changed the behavior of their students. Their perceptions of themselves as teachers did not seem to conflict with their perceptions of the adoption and implementation of EBPs. Subsequently, they were more likely to continue to use them. The value-fit, or compatibility of the EBP, was not an obstacle for Anne and Dawn and therefore, implementation was easier and more successful. This disparate approach to adopting the EPBs among the teachers can be partially accounted for in the fracturing of

leadership in the change process. It is also partially explained by the teachers' variously attributing the ability to implement EBPs to themselves or their characteristics (i.e., it's about me), rather than to evidence-based strategies of behavior management. In the absence of coherence making by a leader, the assumptions regarding attribution remained unchallenged, and the EBPs were implemented poorly with a watered-down effect.

The important implication for the leader of any process of change is that the members of the group must see the leader as invested in the change process. The leader must model the behavior and be on board with the change process. Strong leadership is essential for the resisters and for the adopters so that the process can continue.

Implications

This was a qualitative study of the implementation of EBPs for managing disruptive behavior in a school setting. Several implications can be drawn from the study. The most prominent of the implications relates to the powerful role of individual teacher beliefs in the adoption and implementation of EBPs in school settings. Additional implications are outlined with regard to how to change teachers' beliefs and the implications for leaders as they attempt to adopt and implement of EBPs for students with disruptive behavior.

Several implementation frameworks were examined in order to understand the qualitative data that emerged in this study. The two main frameworks that I used were Fullan's (2001) leading in a culture-of-change model and the CFIR (Damschroder et al., 2009). Neither of these frameworks mentions the role of attribution in the implementation of innovation. Characteristics of individuals are considered in both frameworks, but an individual's attribution of behavior is not. During the course of this study, it became

apparent that teachers attributed causes of the behavior to a myriad of factors. It was also apparent that how teachers attribute problem behavior can prevent the teacher from implementing an EBP related to behavior change in the same way that a lack of value-fit can stop an implementation. It was also clear that inaccurate attribution at any stage of implementation could stop the EBP, even if the EBP appeared to be successful in treating the disruptive behavior.

Weiner (1985) considered aspects of attribution to be locus, control, and stability. The cause of the behavior for the students in this study can be considered to arise from these aspects of attribution. For example, the cause of a behavior can be stable and controllable, such as when a student misbehaves intentionally when asked to complete a task. In this case, the behavior is attributed to the student because the student is perceived to have done it *on purpose* or with intent and so, with intent for the behavior attributed to the student, he is more likely to be punished for his behavior. In the case of Barbara, she attributed the behavior to uncontrollable and unstable causes. Doing so elicited more sympathy from her for the student, and therefore, she attributed less intention to the student's behavior. This in turn decreased her use of EBPs to manage the behavior because she perceived it to be unstable and uncontrollable. Additional research on the role of attribution in implementation of EBPs should include how the value-fit of an innovation for an individual is affected by the causes or aspects of attribution introduced by Weiner.

An additional implication of the findings of the study is the need for more sustained and in-depth preparation of teachers who choose to work with children with special educational needs or disruptive behavior. The implications for teacher preparation

are both individual and systemic and raise many questions. As mentioned in Chapter 4, Anne had a bachelor's degree in an area of education outside of general or special education. She entered a special education classroom without any special education experience. She choose to work in a setting for which she had no experience or education. Should she have been offered the position? Should she have been mentored after accepting it? Should experience have been required? Should schools be required to hire only qualified individuals? Should university preparation programs include additional course work to better prepare special educators to work with the students in their classrooms?

The answer to these questions is "yes." Ironically, however, Anne was the most open to the EBPs, and her comfort with the value-fit of the EBPs stood in contrast to Barbara. She did need additional training and mentoring. However, outside of this research study, or undertaking additional study independently, she did not have access to another professional to help her understand and implement EBPs once she completed the required courses for licensure. Similar to the findings of other researchers (e.g., Stormont et al., 2005; Wilson et al., 2001), a finding for this study is that additional mentoring and feedback are needed in building capacity in the implementation of EBPs for students with disruptive behavior. All of the teachers in this study had formal training in behavior management, but none was able to apply that knowledge in the context of the disruptive behavior targeted for this study. The result is that teachers need sustained time and opportunities to implement EBPs. The need for trialability and observability is especially true if the leaders or other teachers in the school do not support the use of EBPs.

During the course of the study, and confirmed by the teachers at the conclusion of the study, it was apparent that the collaborative work groups were a useful vehicle for sharing knowledge of practices and regarding the implementation of EBPs. The teachers engaged in collaborative strategies that helped a student spend more time in the appropriate classroom (Barbara and Dawn) and transferred a useful behavioral strategy across classrooms (Anne and Barbara). All of the teachers remarked that the collaborative work groups were useful and beneficial in helping them to implement EBPs. Using this type of format for the dissemination of knowledge of EBPs appeared to have been an important part of the study, one that contributed to the perceived social validity of the study for the teachers.

The reflective listening included as part of the collaborative work group agendas played a significant role in helping to change the teachers' perception of the causes of the problem behaviors. This implies that similar strategies might be useful in ongoing training in the use of EBPs. The teachers (with the exception of Barbara) were open to hearing their comments and were receptive to themes that I presented that were taken from the recordings of their discussion and were used as part of the iterative process of the collaborative work group findings. Anne and Dawn were receptive to considering how they attributed problem behavior to numerous, inaccurate causes and were ultimately able to change their perceptions of problem behavior because of the collaborative work group discussions. Emily also realized the importance of the function of the behavior during the final collaborative work group. Assisting teachers in assessing behavior, teaching function and linking function to the implementation of EBPs was a significant and important realization for the teachers in this study. It contributed to the

implementation of EBPs and helped in the reduction of attribution as the default cause of the problem behavior.

Limitations

There were several important limitations to this research. I had intended to include in the collaborative work groups both special and general educators. However, it was difficult to recruit general education teachers, in part because children with challenging behavior are rarely included in general education settings, coupled with the continued use of self-contained classrooms for students with special education needs. As a result of having no general educators, the time that the students spent in the LRE did not change during the course of the study. Additionally, none of the teachers anticipated that the time in the LRE for the students would change significantly in the near future.

Second, the study was completed with a group of teachers who said they have received formal training in the principles of behavior analysis. Although I did not ask directly about the theoretical orientation of the teachers and their familiarity with behavior management, it became clear over the course of the collaborative work groups that understanding behavior as an interaction and outcome between the environment (of which the teacher was a part) and the student was needed but was not addressed in the initial stages of the collaborative work group process. This research could have been more valuable, I now believe, if I had explored with the teachers this aspect of behavior management (i.e., the teachers' contributions to behavior as part of the environment) prior to starting data collection.

The third limitation of the research study is that it was relatively short. It was conducted over a 12-week period, and more time was needed to support the participants

in implementing the EBPs. During the study, two of the teachers had begun to implement EBPs to the benefit of the students. Additional time would have been helpful in generalizing their new knowledge, creating more systematic opportunities to practice, and making sense of the changes required to their classroom practices.

A fourth limitation was that the research was conducted in one school in the southwestern United States, and results cannot be generalized to other schools and other teachers where commitment to the process, leadership, or user benefit might vary from the onset of the study. While the teachers volunteered for the study, their administrator also played a role in recruiting them for the study. Therefore, the participation of the teachers might not have been reflective of other teachers who did not come forward to participate in the study.

A fifth limitation of this study is that I approached it as a behavior analyst and viewed much of the process of adoption and implementation through a functional lens. As I mentioned in Chapter 1, this lens is accompanied by a constructivist view of reality that allows for "sometimes conflicting social realities that are products of human intellects, but that may change as their constructors become more informed" (Guba & Lincoln, 1994, p. 111). My hopes that my conflicting realities as a behaviorist and teacher would become more informed by this functional/constructivist intersection have indeed come true. I acknowledge the difficulty that the teachers recruited for this study had in implementing EBPs simply because of their perceptions and beliefs related to problem behaviors. However, these foundational ways of thinking are not wholly compatible with the functional view of a behaviorist, and they raise important considerations for me as I continue my research. I must look to changing behavior that is not observable and

measurable but rather is influenced by thought that subsequently manifests in actions that affect implementation of behavioral practices.

Future Research

The comments of the teachers in this study generated qualitative themes about the attribution of behavior to students, to other professionals, and to the function of behavior. This attribution resulted in significant implications for the implementation of EBPs in individual teacher's classrooms. Future research in the area of attribution and its contribution to the lack of implementation of EBPs may shed more light on the propensity of individuals to halt an innovation before it starts. In addition, as this research has highlighted, attribution also stopped innovation, even though the implementation of the EBP (i.e., the innovation) appeared to be successful. Additional research regarding attribution at any stage of implementation would be helpful in understanding teachers' inclination to return to attribution for a behavior, rather than to continue to implement an EBP.

Additionally, research that investigates the implementation of EBPs, particularly as EBPs intersect with the teacher's attribution to self, is warranted. If the value-fit of the innovation or EBP is at odds with a teacher's belief (whether about herself or the student), does this then mean that the EBP will never be adopted? Or through additional research studies can we ascertain that strategies such as reflective feedback can challenge preconceived notions about self or behavior enough to truly change the teacher's perception, adoption, and implementation of EBPs?

Finally, there is a continued need for research into ongoing teacher support and how best to provide that to teachers in classroom. The teachers in this study, despite

formal training in behavior management, did not use EBPs for the disruptive behavior of their students. Understanding issues related to the reticence of teachers to use EBPs as it relates to the need for compatibility, trialability of EBPs, observability, and ongoing training and feedback in behavior management may assist in more-sustainable use of EBPs.

Conclusion

This research has taken me on a teacher training and a theoretical journey that has opened up several avenues for me for future research. As I reflect on the implications of this research, I am struck by the importance of understanding attribution in the implementation of EBPs. Now, I see it everywhere. This research has informed my practice by compelling me listen closely to what others are saying about their students. I am quick to question other professionals now if I hear inaccurate attribution, perhaps in the mistaken belief that I can change their perception of the student and therefore can change the adult's perception of the disruptive behavior.

This research has contributed to the field of implementation of EBPs by highlighting the contribution and influence of attribution in implementation. On a more personal level, it has contributed to my understanding of the support that teachers need for EBP implementation because I saw firsthand the difficulties of engaging teachers and their leaders in the implementation process. I have a new, deeper appreciation of the needs of teachers in managing difficult behavior. I also have a deeper understanding of the difficulties teachers may experience as they attempt to implement and innovation, particularly those teachers for whom the EBP is not a value-fit.

An additional consideration that stretches into both the need for additional research and my conclusions is the larger vexing question of who gets to label children

"special" (Bogdon & Knoll, 1995). An examination of the sociologic perspective of special education is not in the scope of this research but is relevant to the themes that emerged herein. The fact that teachers accept a student's disability at face value can be questioned (Bogdan & Knoll, 1995), and this questioning may help in addressing the attribution to disability that was evident in this research. The placement of students in self-contained classrooms addresses the needs of the students based on their disability. The creation of classrooms that segregate in this way, and the subsequent placement of student's therein, could be considered attribution to the disability by the leadership of the school system. The leadership then addresses these needs by creating a place for the student rather than an educational service, thereby perpetuating the acceptance of the disability at face value by peers, teachers, and administration.

Finally, I look forward to teaching and talking about this subject more with graduate and undergraduate students as I try to dispel the notion that relationships and/or attribution works in decreasing disruptive behavior in the absence of EBPs.

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Table 1.

List of Empirically Supported Interventions for Children, Adolescents and Adults with ASD (Wong et al., 2013)

Antecedent-based intervention	Prompting
Cognitive behavioral intervention	Reinforcement
Differential reinforcement of alternative, incompatible, or other behavior	Response interruption/redirection
Discrete trial teaching	Scripting
Exercise	Self-management
Extinction	Social narratives
Functional behavior assessment	Social skills training
Functional communication training	Structured play group
Modeling	Task analysis
Naturalistic intervention	Technology-aided instruction and intervention
Parent-implemented intervention	Time delay
Peer-mediated instruction and intervention	Video modeling
Picture Exchange Communication System	Visual support
Pivotal response training	

Table 2.

Teachers Anne, Barbara, & Dawn (A, B, and D respectively) Self-reports of use of EBPs from 10/19/15 to 12/4/15

Week of	10/19/15	11/2/15	11/16/15	11/30/15
		ABI		
Rarely				
Sometimes	A B	A		A
Often			A	
Every time			B	
		Reinforcement		
Rarely	B		B	
Sometimes				
Often	A	A	A	
Every time		D	D	A
		Social Narratives		
Rarely	A	A	A	A
Sometimes	B		B	
Often				
Every time				
		Other/exercise		
Rarely				
Sometimes				
Often			B	
Every time				

Table 3.

An Overview of the Research Activities and the Dates on Which They were Completed

Activity	Dates completed
Initial interviews, SDQ, Prior knowledge questionnaire	9/14/15
Final interviews, SDQ, Post knowledge questionnaire, social validity questionnaire	12/11/15
Collaborative work groups	10/2/15, 10/16/15, 10/26/15, 11/13/15, 12/11/15
First observation	10/16/15
Second observation	11/13/15
Third observation	12/11/15
Self report if completed	10/19/15, 11/2/15, 11/16/15, 11/30/15
Third observation	12/11/15
Third observation	12/11/15

Table 4.

Student Scores on the SDQ as Assigned by Teachers at the Beginning and the End of the Study. No Prescores were Recorded for Teacher B.

Teacher Dawn	*Pre*		*Post*	
Total difficulties score	18	High	16	High
Emotional problems score	2	Close to average	2	Close to average
Conduct problems score	2	Close to average	2	Close to average
Hyperactivity score	8	High	7	Slightly raised
Peer problems score	6	Very high	5	High
Prosocial score	3	Very low	5	Slightly lowered
Impact score	3	Very high	3	Very high
Teacher Anne	*Pre*		*Post*	
Total difficulties score	23	Very high	25	Very high
Emotional problems score	5	High	6	Very high
Conduct problems score	3	Slightly raised	3	Slightly raised
Hyperactivity score	10	Very high	8	High
Peer problems score	5	High	8	Very high
Prosocial score	4	Low	5	Slightly lowered
Impact score	6	Very high	5	Very high

Table 4.

Student Scores on the SDQ as Assigned by Teachers at the Beginning and the End of the Study. No Prescores were Recorded for Teacher B.

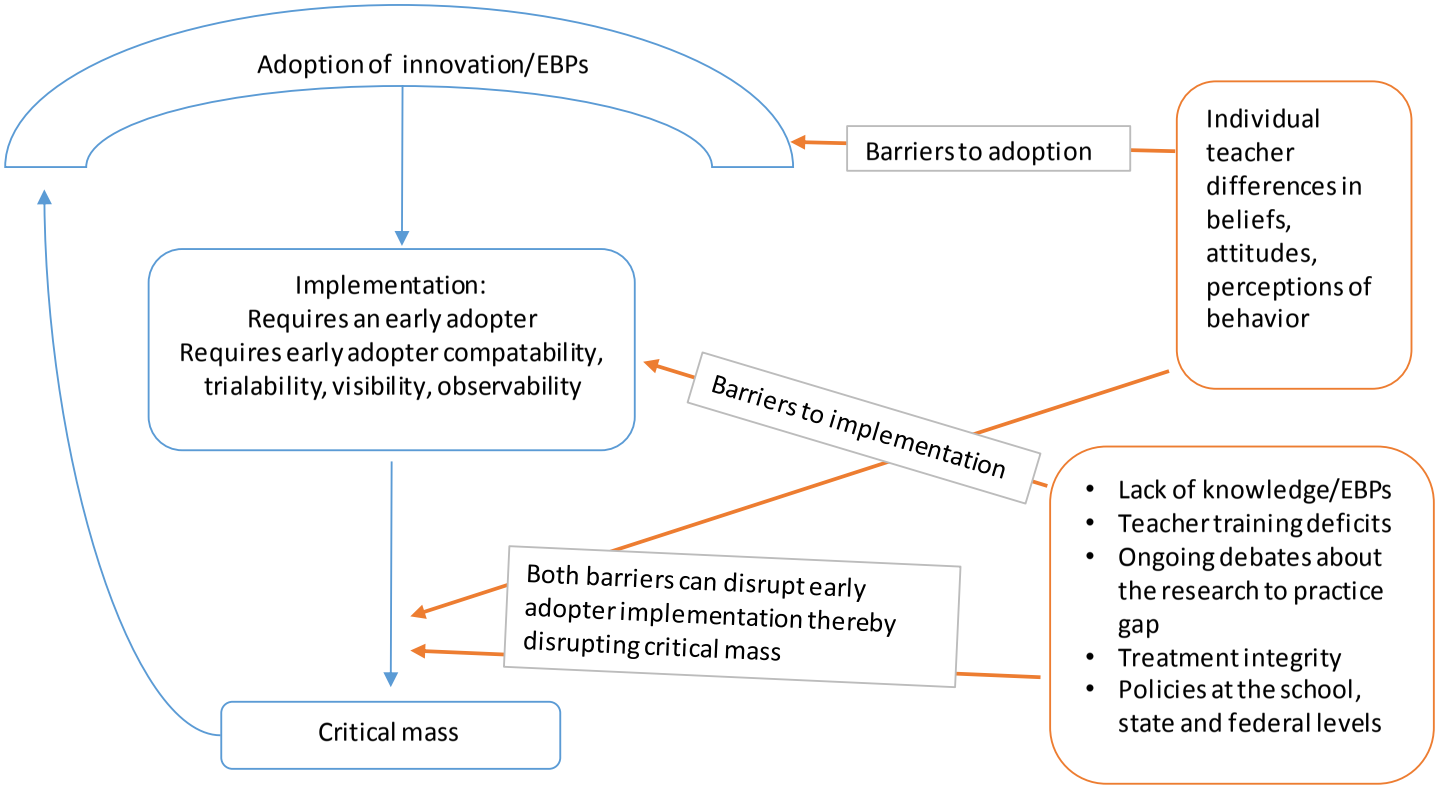
Teacher Barbara	*Post*	
Total difficulties score	23	Very high
Emotional problems score	7	Very high
Conduct problems score	3	Slightly raised
Hyperactivity score	8	High
Peer problems score	5	High
Prosocial score	8	Close to average
Impact score	3	Very high

Table 5

Teacher Anne, Barbara, Dawn, and Emily (A, B, D, and E respectively) Ratings of the Collaborative Work Group Process as Recorded Using the Social Validity Questionnaire and Completed on the Final Day of the Work Groups.

Question	Rating				
	Dissatisfied	Somewhat dissatisfied	Satisfied	Well satisfied	Very well satisfied
1			B	A D	E
2			B	A D E	
3			B E	A D	
	Not at all	A little	Well	Very well	Extremely well
4			D B	A	
5			A D B		
6			B	A D	
7			A B	D E	
8			A B	D E	
	Extremely difficult	Very difficult	Difficult	Somewhat difficult	Not at all difficult
9			B	A D	E
	Never	Doubtful	Maybe	Strongly	Very strongly
10			B	D	A
11			B	A D	

Figure 1. Topics and theoretical frame that contribute to the reduction of adoption and implementation of EBPs



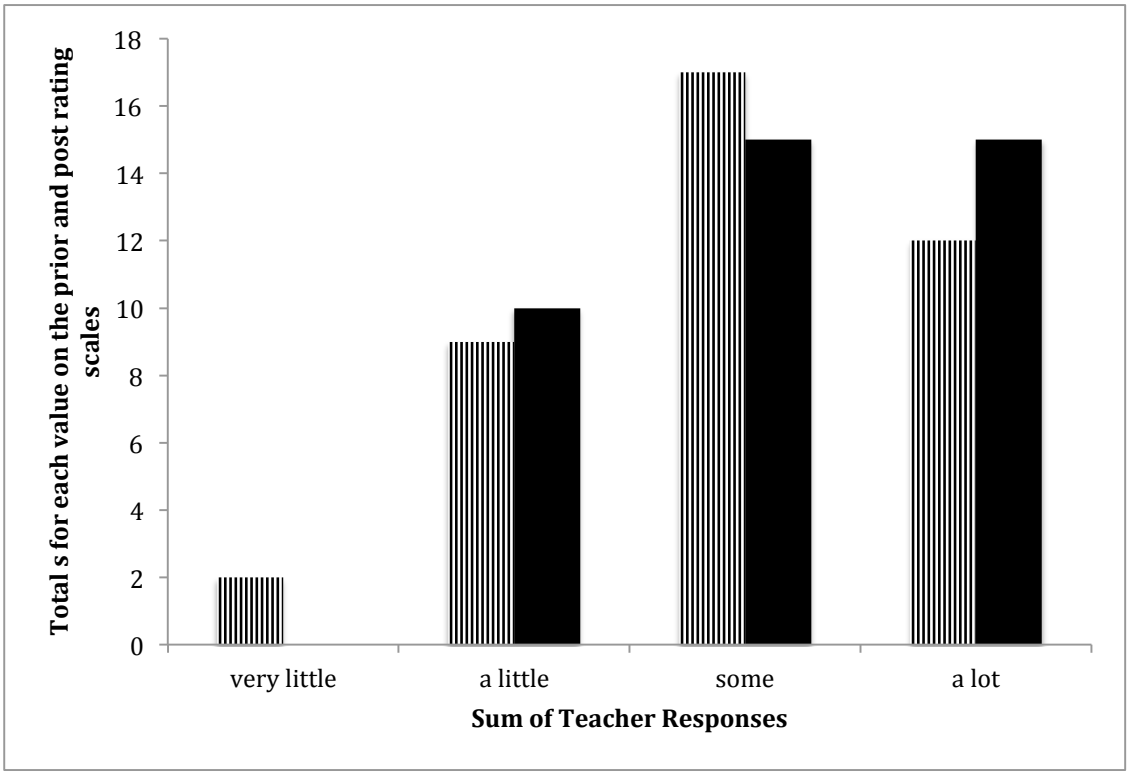


Figure 2. Sum of all teacher responses on the prior- and post-knowledge questionnaires. The post-knowledge questionnaires showed an increase in knowledge for all participants, and no teacher reported that she knew very little on the post-knowledge questionnaires. Also, on the post-knowledge questionnaire, teachers reported an increase in knowledge, with more teachers reporting that they knew a lot about the principles and strategies in the questionnaire.

Appendix A: Prior- and post-knowledge questionnaires

Prior-knowledge Questionnaire

Put a check mark in the box that you think is a good estimate of how much you know.

	How much do you know about…?	**A lot**	**Some**	**A little**	**Very little**	**Comment**
1	**Applied behavior analysis**?					
2	**Reinforcement** and how it works, particularly for changing disruptive behaviors?					
3	**Punishment** and how it works, particularly for changing disruptive behaviors?					
4	**Why children do what they do**?					
5	**Why behavior continues even though you attempt to stop it**?.					
6	Interventions for **disruptive behavior for children**?					
7	**Changing things about tasks** in order to change disruptive behavior?					
8	**Changing the environment** in order to change disruptive behavior?					
9	**Communication** as it relates to disruptive behavior?					
10	**Targeting specific behavior** during classroom activities (e.g., decreasing disruptive talking aloud).					

Post-knowledge Questionnaire

Put a check mark in the box that you think is a good estimate of how much you know now.

How much do you know now about…?		A lot	Some	A little	Very little	Comment
1	**Applied behavior analysis**?					
2	**Reinforcement** and how it works, particularly for changing disruptive behaviors?					
3	**Punishment** and how it works, particularly for changing disruptive behaviors?					
4	**Why children do what they do**?					
5	**Why behavior continues even though you attempt to stop it**?					
6	Interventions for **disruptive behavior for children**?					
7	**Changing things about tasks** in order to change disruptive behavior?					
8	**Changing the environment** in order to change disruptive behavior?					
9	**Communication** as it relates to disruptive difficulties?					
10	**Targeting specific behavior** during classroom activities (e.g., decreasing disruptive talking aloud).					

Appendix B: Social Validity Questionnaire

Please rate your satisfaction with the collaborative work group process.

	Dis-satisfied	Somewhat dis-satisfied	Satisfied	Well-satisfied	Very well-satisfied
1. How satisfied were you with the collaborative work group as a process for helping you better understand EBPs?					
2. How satisfied were you with the collaborative work group as a process for helping you implement EBPs?					
3. How satisfied were you with the process for choosing the EBPs?					

Please rate how well you think the collaborative work group process addressed these items.

	Not at all	A little	Well	Very well	Extremely well
4. How well did the plan created for the target student address the student's behavioral needs?					
5. How well did the plan created for the target student recognize and support the needs of other school personnel who work with the student (e.g., EA, administrators)?					
6. Overall, how well did the EBPs fit with your values and beliefs about teaching a student with a disability and creating a meaningful educational experience?					
7. How well did the collaborative work group format and discussions recognize and build on your teaching or administrative experience and strengths?					
8. How well did the collaborative work group make use of resources (e.g., help from other teachers, professional support groups)?					

Please rate how difficult you think involvement in the collaborative work group process was.

	Extremely difficult	Very difficult	Difficult	Some-what difficult	Not at all difficult
9. All things considered, how difficult was it for you to be involved in the collaborative work group process (e.g., time involved, coordination, tasks)?					

Please rate how you might use EBPs in the future.

	Never	Doubtful	Maybe	Strongly	Very strongly
10. How strongly do you believe you will keep using the support strategies (EBPs) for a long time (e.g., over one year) even though other members of the support team will not be available as often (e.g., little to no contact from the researcher, assistance by telephone, less contact with team personnel)?					
11. How strongly would you consider using this type of forum to learn about and implement EBPs in the future?					

Please answer these questions about the collaborative work group process.

12. What aspect of the collaborative work group process was not useful?
13. What aspects of the collaborative work group process were most useful?

Thank you for your input!

Appendix C: SDQ (Goodman, 1997)

Strengths and Difficulties Questionnaire

T 4-10

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of the child's behavior over the last six months or this school year.

Child's name ..... Male/Female

Date of birth.....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children, for example toys, treats, pencils	☐	☐	☐
Often loses temper	☐	☐	☐
Rather solitary, prefers to play alone	☐	☐	☐
Generally well behaved, usually does what adults request	☐	☐	☐
Many worries or often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, depressed or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often offers to help others (parents, teachers, other children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets along better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Good attention span, sees work through to the end	☐	☐	☐

Do you have any other comments or concerns?

Please turn over - there are a few more questions on the other side

Appendix C: SDQ (Goodman, 1997) page 2

Overall, do you think that this child has difficulties in any of the following areas: emotions, concentration, behavior or being able to get on with other people?

No	Yes- minor difficulties	Yes- definite difficulties	Yes- severe difficulties
☐	☐	☐	☐

If you have answered "Yes", please answer the following questions about these difficulties:

• How long have these difficulties been present?

Less than a month	1-5 months	6-12 months	Over a year
☐	☐	☐	☐

• Do the difficulties upset or distress the child?

Not at all	Only a little	A medium amount	A great deal
☐	☐	☐	☐

• Do the difficulties interfere with the child's everyday life in the following areas?

	Not at all	Only a little	A medium amount	A great deal
PEER RELATIONSHIPS	☐	☐	☐	☐
CLASSROOM LEARNING	☐	☐	☐	☐

• Do the difficulties put a burden on you or the class as a whole?

Not at all	Only a little	A medium amount	A great deal
☐	☐	☐	☐

Signature ..... Date .....

Thank you very much for your help

Appendix D: Interview questions

1. Can you describe a typical day of teaching?
2. What are evidence-based practices? Can you describe one or two that you have used?
3. What do you consider to be disruptive behavior?
4. Talk about your experiences working with students with disruptive behavior.
5. Can you describe the last time a difficult incident with disruptive student behavior occurred, from the beginning of the incident to the end?
    a. Why do you think the student did that?
    b. Describe what was going on with the other students and staff when the disruptive behavior was happening.
    c. What did you do? Did you feel it was the correct thing to do?
    d. If you were talking with a colleague, how would you describe the student?
6. What are the factors (for example, lack of resources, lack of support for training, etc.) that hamper you from implementing EBPs in your classroom?
7. What are the supports that you need to assist you in implementing EBPs in your classroom?
8. How would you like to handle the disruptive behavior in the future?

Appendix E: Individualized ABC.
Operational definition:

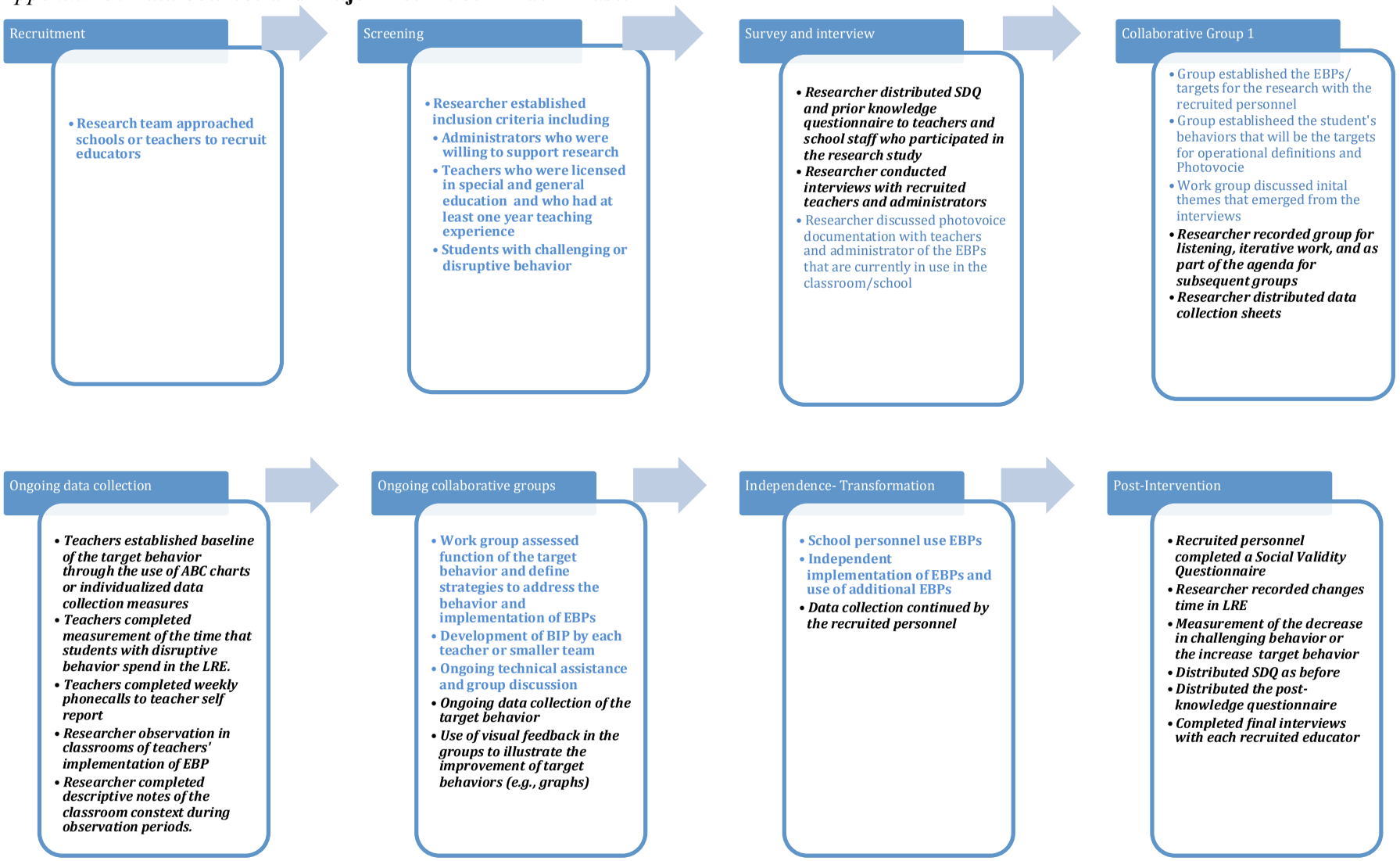
Date	**Start Time**	**Setting- circle one**	**Antecedents**-: What happened immediately before the behavior? **Circle any that apply and specify**	**Behaviors: Circle** the behavior that occurred	**Consequences: What** did the adults/ peers do? **Circle** the behaviors that occurred	What did he do after the adults intervened?	**End time**
		Gen Ed Cl Sp Ed Clrm Lunch rm Hall Outside Other___	• Task _____ • Instruction_____ • End of an activity • Attention from others • No attention • Other _____		Talked to him Restated the instruction Walked away Ignore Called for assistance Time away Cues to calm Other _____	• Quieter • Louder • Used calming • Strategies • Complied • Re-escalated Other	
		Gen Ed Cl Sp Ed Clrm Lunch rm Hall Outside Other___	• Task _____ • Instruction_____ • End of an activity • Attention from others • No attention Other _____		Talked to him Restated the instruction Walked away Ignore Called for assistance Time away Cues to calm Other _____	• Quieter • Louder • Used calming • strategies • Complied • Re-escalated Other	

Appendix F: Daily recording of the student's inclusion in the LRE

LRE is defined as the placement where the student has the opportunity to be educated with nondisabled peers, to the greatest extent appropriate. This includes academic and instructional time, not just play time or nonacademic activities such as PE.

Date	**Yes**	**No**	**If yes, for how long?**	**If no, why not?**
Was the student included in the LRE today?			From (insert time) 1. ________ to ________ 2. ________ to ________ 3. ________ to ________	
Date	**Yes**	**No**	**If yes, for how long?**	**If no, why not?**
Was the student included in the LRE today?			From (insert time) 1. ________ to ________ 2. ________ to ________ 3. ________ to ________	
Date	**Yes**	**No**	**If yes, for how long?**	**If no, why not?**
Was the student included in the LRE today?			From (insert time) 1. ________ to ________ 2. ________ to ________ 3. ________ to ________	
Date	**Yes**	**No**	**If yes, for how long?**	**If no, why not?**
Was the student included in the LRE today?			From (insert time) 1. ________ to ________ 2. ________ to ________ 3. ________ to ________	
Date	**Yes**	**No**	**If yes, for how long?**	**If no, why not?**
Was the student included in the LRE today?			From (insert time) 1. ________ to ________ 2. ________ to ________ 3. ________ to ________	

Appendix G. ***Data Sources*** and **Major Activities** in Each Phase.



Appendix H: Teachers self-report of implementation of EBP.

How often did you use EBP 1?	**EBP 2**	**EBP 3**	**Comments**
Name of EBP 1, 2, & 3:			
Every time the behavior occurred			
As often as I could but not every time			
Sometimes			
Rarely			

How often did you instruct others to use the EBP?

How often did you use EBP 1?	**EBP 2**	**EBP 3**	**Comments**
Name of EBPs 1, 2, &3 :			
Every time the behavior occurred			
As often as I could but not every time			
Sometimes			
Rarely			

Appendix I: Observation data collection for procedural fidelity
Teacher: _____ Date _____

	Observed Element	**YES**	**NO**	**Comments**	**N/A**
1	Uses EBP 1 (_____) as planned and discussed in the collaborative work group				
2	Uses EBP 2 (_____) as planned and discussed in the collaborative work group				
3	Uses EBP 3 (_____) as planned and discussed in the collaborative work group				
4	Provided constructive feedback to others implementing the EBP (EBP observed _____)				
5	Maintains focus on the implementation of the EBP during the course of the observation (EBP observed _____)				
6	Responds to concerns of other adults about the EBP				
7	Responds to concerns of students about the EBP				
8	Data collected for EBP (Data collection for EBP _____)				
9	Addresses all aspects of the behavior plan as discussed during collaborative work group				
10	Addresses disruptive behavior immediately with EBP (EBP observed _____)				
11	Data collected regarding LRE				
12	Data collected for occurrences of the target behavior				
13	Other:				
14	Other:				
15	Other:				