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Directed Consultation and Supported Professionalism: Promoting Adaptive Evidence-Based Practices in Rural Schools

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Abstract

Although there have been several advances in the development of evidence-based practices (EBPs) to support students with disabilities, many rural schools struggle to use EBPs. Rural schools may experience challenges that constrain their potential to provide support for the implementation of EBPs. Furthermore, there may be a mismatch between EBPs and the circumstances, resources, and needs of many rural schools. Directed consultation is an intervention support framework designed to adapt the use of EBPs by using local data and stakeholders' insights to align strategies to the unique features and needs of rural schools, teachers, and students. This article considers the use of directed consultation to support the individualization and intensification of intervention for students with disabilities in rural schools. The establishment of rural research-practitioner partnerships is also discussed with the goal of developing a broad range of directed consultation content and delivery approaches.

Keywords

rural professional development, evidence-based practices, research-practitioner partnerships, supported professionalism

Many rural schools experience a range of constraints (e.g., geographic isolation, limited resources, lack of a critical mass of students with specific learning needs) that may challenge their capacity to support diverse learners (Alexander, Williams, & Nelson, 2012; Barrett, Cowen, Toma, & Troske, 2015; Hoppey, 2016). These challenges may also limit the professional supports necessary to help teachers learn and adapt new practices to meet the needs of students (Berry, 2012; Williams, Martin, & Hess, 2002). Although rural districts often work to find creative ways to address these concerns, a framework of systematic resources, strategies, and consultative supports is needed to help rural schools promote the academic, behavioral, and social adjustment of students with disabilities (Berry, Petrin, Gravelle, & Farmer, 2011; Kurth & Keegan, 2014; Mueller & Brewer, 2013). Recently, there has been a shift from viewing the intervention needs of students with disabilities as a process of implementing scripted evidence-based practices (EBPs) with fidelity, to a data-driven process of intervention intensification that centers on adapting strategies to the specific needs/responses of individual students (Chorpita & Daleiden, 2009; Fuchs & Fuchs, 2015; Ludlow, 2014; Mason-Williams, Frederick, & Mulcahy, 2015).

The purpose of this article is to discuss the potential use of directed consultation as an intervention support framework to guide the adaptation of EBPs for students with disabilities in rural schools. Directed consultation is a research-practitioner partnership model designed to use local data and stakeholders' insights to adapt EBPs to the unique features and needs of specific schools, teachers, and students. Building from the voices of rural stakeholders and data on the school adaptation of rural students (see Farmer & Hamm, 2016), directed consultation was designed specifically to address intervention support needs of rural schools and teachers (Berry & Gravelle, 2013; Farmer, Leung, et al., 2006). Although this model was established to guide general education teachers in the use of universal

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strategies to support all students, it has been adapted to support students with individualized and intensive intervention needs, including students with disabilities (Rizzo et al., 2017; Sutherland, Farmer, Kunemund, & Sterrett, 2017).

Our focus is to consider how the directed consultation framework may be used within the context of a research-practitioner partnership to support the intensification and individualization of the practice elements of EBPs for students with disabilities in rural schools. We begin by providing a brief review of special education support needs in rural communities. We follow this with an overview of directed consultation components, processes, and outcomes of its use in rural settings. Next, we discuss how directed consultation can be used to promote supported professionalism as rural special educators develop and refine a broad range of data-driven, adaptive, EBPs to address the support needs of rural students with disabilities. To conclude, we discuss the need for research-practitioner partnerships that build a technical assistance and delivery framework that serves as a resource to rural special educators.

Special Education Support Needs in Rural Communities

Much of the innovative work on supporting educational practice in rural schools involves personnel preparation programs for preservice teachers. Although our focus is on intervention support for practicing special and general educators who serve students with disabilities, three points from the personnel preparation literature are instructive for the current discussion. First, it is critical to establish school-university partnerships as rural schools look to universities to help recruit, prepare, and sustain their workforce (DeSutter & LeMire, 2016; Hoppey, 2016; Williams et al., 2002). This includes providing teacher education candidates with clinically rich training experiences, opportunities to experience the activities and responsibilities involved in being a special educator in rural settings and developing preservice teachers' knowledge and skills in the use and delivery of EBPs. For school–university partnerships to succeed it is necessary to align university activities with school needs; identify and establish training content, strategies, and service delivery approaches consistent with the culture, resources, capacities, and constraints experienced by rural schools; and establish a collaborative and reciprocal relationship that reflects the mutual dependence and complementary expertise among university and school professionals (Hoover & Erickson, 2015; Maheady, Magiera, & Simmons, 2016). Second, it is important to embed training experiences within authentic practice settings and help preservice teachers learn to tailor strategies to their students and the contexts in which they are working (Hoover & Erickson, 2015; Hoppey, 2016; Maheady et al., 2016; Williams et al., 2002). Third, it is practical to utilize technology to reduce the constraints and impact of distance on professional training activities for preservice teachers who work in remote rural schools. Several innovative programs demonstrate that content, monitoring, coaching, and virtual analog experiences can all be effectively delivered through Internet resources (Alexander et al., 2012; Hager, Baird, & Spriggs, 2012; Hartley, Ludlow, & Duff, 2015).

These three points are reflected in research on teachers' and administrators' perceptions of the intervention support needs of practicing special education teachers. A primary concern of rural special educators centers on professional development that does not reflect their actual experiences, the contexts they work in, the constraints they experience, and the resources they have available to them (Berry & Gravelle, 2013; Williams et al., 2002). A second and related concern is that rural special education teachers need support, training, and technical assistance on real-world issues rather than "abstract training" about practices in ways that are disconnected from their immediate realities. To address this, practicing teachers indicate a need for intervention support and consultation that reflects their roles, is embedded in what they are currently doing, helps them learn content to support students whom they are working with and who have characteristics/needs they have not worked with previously, and supports their adaptation of strategies to their specific circumstances (Berry, 2012; Berry et al., 2011; Hoover & Erickson, 2015; Hoppey, 2016; Weiss, Petrin, & Farmer, 2014). Third, there is a need to reduce travel time for professional development, make access to specialists available when needed rather than waiting until they can get to the school, and link teachers across schools and districts who have the same roles and address the same student issues and needs. Advances in technology can be leveraged to address these needs and promote effective support and consultation (Alexander et al., 2012; Amendum, Vernon-Feagans, & Ginsberg, 2011; Berry & Gravelle, 2013). Directed consultation is designed to address these needs for rural special educators.

Overview of Directed Consultation

It is well documented that a national "one size fits all" approach to educational practice, intervention support, and research cannot effectively accommodate the diverse needs and local circumstances of rural communities, schools, and students (Berry et al., 2011; Howley, 1997; Kannapel, 2000; Williams et al., 2002). Across the United States, rural districts are very heterogeneous in terms of geographical size and population, the ethnic and cultural make-up of their communities, proximity to metropolitan centers and resources, and economic capacity and labor force needs and opportunities (Brown & Schafft, 2011; Lichter & Johnson, 2007; Save the Children, 2002; Showalter, Klein, Johnson, & Hartman, 2017). Yet, regardless of characteristics, many

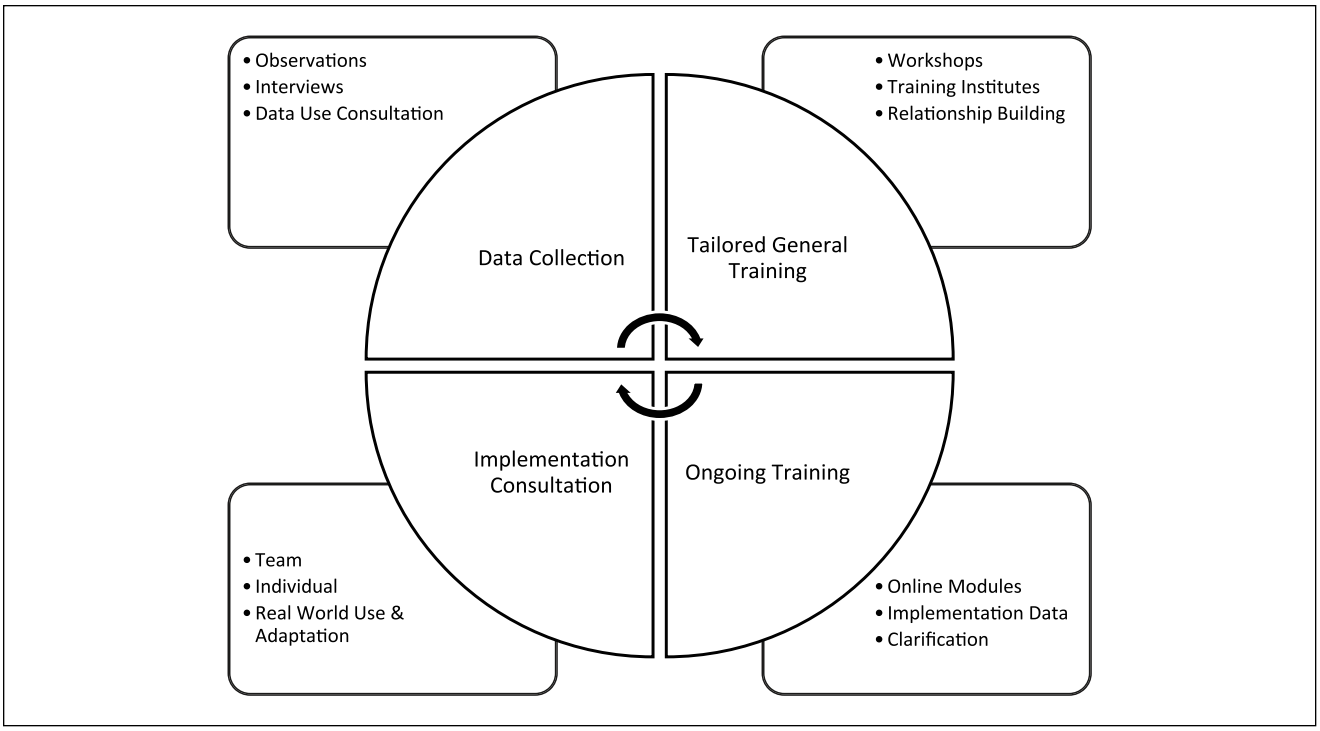

Figure 1. The directed consultation process.

rural schools are a hub of community life and their structure, organization, and activities must be aligned with local resources, needs, and constraints (Howley, 1997; Schafft, 2016).

The views of teachers and school leaders in rural districts reflect this diversity and the need for practices that are responsive to local circumstances. In interviews, conversations, and surveys with both special and general education teachers and building administrators in rural schools across the nation, it is common to hear two general refrains: "there is no other place like us, so standardized practices may not work here" and "we don't have the resources, expertise, and supports to meet the needs of struggling students" (Berry & Gravelle, 2013; Berry et al., 2011; Farmer & Hamm, 2016; Williams et al., 2002). Directed consultation was developed to address these two points by establishing a framework to tailor EBPs to the culture and resources of rural schools (Farmer et al., 2013; Motoca et al., 2014). This approach emphasizes working from the perceived needs, strengths, and circumstances as expressed by multiple stakeholders (i.e., teachers, parents, students, and administrators) and involves using local data and information to adapt EBPs to a particular context and situation (Farmer & Hamm, 2016).

Typically, directed consultation is conducted by an intervention specialist who has advanced graduate training in special education, school psychology, or a related discipline. But it may also involve a team of intervention trainers or support specialists who bring added expertise depending on the needs and circumstances of the school. The primary consideration focuses on helping schools to use their own resources and strengths while providing them with training and content that promotes their capacity to meet the needs of their students. Thus, the intervention specialist approaches the directed consultation process as a partnership with the school, and the components of this model are designed to facilitate a dynamic, negotiated relationship in which there are continuous opportunities to adapt and tailor professional development and consultation to the needs of the stakeholders. Consequently, while the goals and general aims (i.e., fostering all students' academic, behavioral, and social success) may be similar across schools, the actual professional development training and consultation may vary significantly from school to school.

The directed consultation process involves four complementary components: (a) data collection, (b) tailored general training, (c) ongoing training, and (d) implementation consultation (see Figure 1; Farmer et al., 2013). Directed consultation is a recursive process with each step informing subsequent steps. It is also a system of continuous improvement with the processes being repeated to foster refinement, adaptation, and integration of evidence-based, data-driven strategies into the culture of school practices and the delivery of individualized services.

Data Collection

In the preintervention phase, it is critical to collect information about current practices, needs, strengths, resources, and

potential intervention leverage points (Motoca et al., 2014). The focus is not on identifying how evidence-based programs can be shoehorned into current practices. On the contrary, the goal is to identify how current practices fit with the evidence-base and to identify how strategies within evidence-based programs can be adapted to fit real-world circumstances of the teacher, student, and other stakeholders (De Arment, Reed, & Wetzel, 2013; Farmer, Sutherland, et al., 2016). The broader consideration is to identify factors or issues that need to be addressed to promote success at the student and/or classroom level and to identify process mechanisms that will support such success (Sutherland et al., 2017). The aims of preintervention assessment are to identify potential intervention leverage points, strategies that correspond with these leverage points, and impact indicators for progress monitoring and intervention adaptation (Farmer, Chen, et al., 2016; Maggin, Wehby, Farmer, & Brooks, 2016).

Observations are conducted after brief conversations with teachers and other stakeholders to gain their perspective on classroom functioning and support needs. Once potential focal points are identified, a scouting report observation is conducted to clarify what is working, areas that may be strengthened, the correspondence of current practices with specific EBPs, issues that need to be addressed, and intervention leverage points to promote more successful student and classroom functioning (Farmer, Chen, et al., 2016; Farmer & Hamm, 2016). After observations are conducted, it is useful to have additional stakeholder conversations to clarify what was observed and to consider how potential strategies and changes would be received by stakeholders (Farmer et al., 2013). As part of these conversations, it is important to clarify current data collection and data use strategies to guide practice, the capacity and willingness of stakeholders to make adaptation in their data use approaches, and potential resources and personnel to implement changes in their data collection and data use infrastructure. The totality of data collected is used to guide the directed consultation process and the adaptation of EBPs to local circumstances and needs (Farmer & Hamm, 2016; Rizzo et al., 2017).

Tailored General Training

Building from preintervention data, workshops or training institutes are conducted that are responsive to the needs, resources, and organization of schools. Although some aspects of training and content reflect the general framework of the evidence-based model, actual activities, training format, content, examples, and practices are tailored to the school and participants (Farmer et al., 2013). Participants are asked about their training needs and interests and are given an opportunity to provide suggestions and guidance about the training institutes as they are being planned. The actual training is designed to be dynamic and responsive to participants' responses. Therefore, as the workshop activities unfold, what is covered and how it is covered will be determined in large part by how participants respond to the content (Farmer & Hamm, 2016). The goal is to ensure that content reflects issues that teachers experience in the classroom and that teachers learn strategies they need and can immediately apply.

Directed consultation involves two forms of relationship building. First, it is important that teachers view the intervention specialist as a team member. Training activities reflect the intervention specialist's insights from preintervention assessments, are tailored to the context, and take on a "building for success" tone that emphasize strengths and opportunities while acknowledging constraints and difficulties that teachers experience. Most importantly, it is critical for the intervention specialist to sincerely view teachers as experts about their students and circumstances and to approach them as partners as they work through the application of training content to their particular needs. Second, it is important for teachers to view each other as resources and supports. To do this, it is helpful for the intervention specialist to be aware of the general relationships among teachers and other school personnel and to also know which individuals are likely to be viewed as leaders by their peers while being attuned to any tensions among individuals or resistance with regard to the training. Therefore, this type of information should be collected by the intervention specialist in the preintervention assessment phase and the intervention specialist should be aware of these various dynamics as the training unfolds.

The intervention specialist tries to achieve five aims by the completion of general tailored training. The first aim is to help teachers understand what directed consultation involves at a relational level and to foster a climate of partnership. The second aim is to create a strength-based solution-oriented mind-set in which teachers view students' difficulties as opportunities to foster learning and success. The third aim is to present content that is tailored to the needs of students and that fosters adaption of EBPs to students' needs and circumstances. The fourth aim is to help teachers become competent in a few initial strategies they can successfully apply in their classrooms. The fifth aim is to develop a communication system (e.g., videoconferencing, email, secure-discussion site) to build a supportive professional community.

Ongoing Training

After tailored general training, the next step is to move forward with detailed and focused training modules. These modules are designed to provide more elaboration on content presented in the training institute as well as new and complementary content that was determined to be needed in

the scouting report process (Farmer et al., 2013). This may involve teams of teachers who share students, a group of teachers who need support on a shared issue, or a single teacher who wants help with a specific issue or strategy. Although modules may involve standard content, they can be tailored to the issue of interest and the intervention specialist can shape content to telescope in on strategies and solutions for specific situations (Farmer & Hamm, 2016). This can be done with teachers completing modules online and asking and answering questions through email to help the intervention specialist make decisions about next steps. Teachers then implement identified strategies with guidance from the intervention specialist.

An important part of this process involves the collection of data about implementation. This may include teachers completing daily strategy-use checklists and weekly implementation logs to help the intervention specialist gain a sense of teachers' use, perceptions, and efficacy with specific strategies. It may also involve recorded or live video capture and assessment of classroom practices (e.g., Alexander et al., 2012; Amendum et al., 2011; Institute of Education Sciences [IES], 2014) or some type of self, peer, or specialist data capture with regard to student or classroom performance on specific constructs of interests (e.g., Farmer, Chen, et al., 2016; Jimenez, Mims, & Baker, 2016; Motoca et al., 2014; Rizzo et al., 2017). When teams of teachers address the same issues and use the same or similar strategies it can be helpful to establish a blog or a protected electronic discussion board where teachers can share their experiences and learn from each other as well as to get feedback from the intervention specialist. As teachers engage content and implement strategies in the classroom they have a framework to reflect on and self-evaluate their practice; record and express successes and difficulties to others to provide guidance; and establish a network/community to provide sustained support as well as suggest refinement and innovation for practice and service delivery (Farmer & Hamm, 2016).

Implementation Consultation

In addition to ongoing training, the intervention specialist can hold team and/or individual consultation meetings to guide implementation. These meetings can be conducted either by videoconferencing or face-to-face (Farmer et al., 2013). The purpose of these meetings is to address "real world" issues by generating practical solutions that include adapting evidence-based strategies to specific circumstances and by establishing a game plan and timeline for next steps. This phase of directed consultation is where teachers move from learning about the general use and application of strategies to mastering and adapting strategies for a specific student and/or classroom situation. This process is pivotal to intervention intensification and individualization for students with disabilities and youth who are not responsive to universal approaches within multitiered systems of support (MTSS; Farmer et al., 2018; Maggin, Wehby, Farmer, & Brooks, 2016).

Data collection is critical for implementation consultation and intervention intensification (Farmer & Hamm, 2016; Ludlow, 2014; Wehby & Kern, 2014). When discussing uptake and use of specific strategies, it is beneficial to have data to show teachers where and how their students are making progress as well as to help guide adjustments in the use of the strategy (Maggin, Wehby, Farmer, & Brooks, 2016; Mueller & Brewer, 2013). As intervention specialists provide consultation to support the intensification of evidence-based strategies, functional assessments, graphs of student progress, and self-monitoring data can all help teachers to see what is working and where modifications may be needed (Kern & Wehby, 2014; Maggin, Wehby, & Gilmour, 2016; Rizzo et al., 2017). Furthermore, the scouting report and other observation systems may be used to determine the effectiveness of teachers' implementation of specific practices as well potential intervention leverage points that are not effectively addressed with current strategies (Farmer et al., 2017; Farmer, Chen, et al., 2016; Motoca et al., 2014). Consequently, when intervention specialists meet with teachers for implementation consultation it is helpful to review data from the online implementation phase and to conduct observations and scouting reports prior to the meeting if specific concerns have been identified (Farmer & Hamm, 2016; Rizzo et al., 2017).

Outcomes of the Use of Directed Consultation in Rural Schools

Directed consultation was developed in low-resource elementary and middle schools (e.g., Cadwallader et al., 2002; Farmer, Goforth, et al., 2006; Gut et al., 2004). Following the development work, a series of randomized control trials were conducted in the Rural Early Adolescent Learning (REAL) Project. This involved 36 low-resource rural schools in nine states across the United States to evaluate the impact of the Supporting Early Adolescent Learning and Social Success (SEALS) program, which consists of the Behavioral, Academic, and Social Engagement (BASE) model as well as content related to early adolescent development and the transition to middle school (see Farmer et al., 2013). The BASE model is composed of three components: Competent Enhancement Behavior Management (CEBM; Farmer, Goforth, et al., 2006), Academic Engagement Enhancement (AEE; Gut et al., 2004; Rizzo et al., 2017), and Social Dynamics Management (SDM; Farmer, Chen, et al., 2016; Farmer et al., 2018). The CEBM component focuses on helping teachers establish a proactive structure and positive strategies to promote and reinforce students' productive behavior while using difficulties as opportunities to teach

appropriate behavior. The *AEE* component involves helping teachers develop a format to organize, pace, and reinforce instructional activities to maintain the attention and involvement of all students including those with learning problems. The *SDM* component is designed to enhance teachers' awareness of classroom social dynamics and teach them how to use this knowledge to foster natural social supports for academic engagement and positive classroom behavior (Farmer et al., 2013).

The review following provides a brief summary of the Project REAL sample and outcomes of the randomized controlled trial (RCT) to evaluate the directed consultation model (see Farmer & Hamm, 2016; Farmer et al., 2013; Hamm, Farmer, Lambert, & Gravelle, 2014). General education sixth-grade teachers in intervention and control schools were invited to participate and 100% (188 teachers) consented. Likewise, sixth-grade students in general education classes were invited to participate and nearly 60% (2,453 students) returned parental consent. Over 35% of the sample were members of an ethnic minority group: 26% African American, 4% Latino, and 6% Native American.

The findings reported here include analyses conducted with subsamples as well as results for the full sample depending on the focus and aims of specific studies. Several differences were found between teachers who received directed consultation professional development support and control schoolteachers who did not receive training in the BASE model. First, teachers in intervention schools (i.e., BASE schools) were more likely to be attuned to classroom social networks (Farmer, Hall, Petrin, Hamm, & Dadisman, 2010; Hamm, Farmer, Dadisman, Gravelle, & Murray, 2011). These effects were true for students in general, including students from ethnic minorities and students with disabilities and suggests that teachers who complete BASE training may have a greater knowledge of students' peer group affiliations, including students who may be socially vulnerable. Second, classroom observations indicated that teachers who received directed consultation were more adept at managing the classroom ecology, including social dynamics, than teachers in comparison schools (Hamm et al., 2011). In turn, teachers' attunement and management of classroom social dynamics was associated with students' having more favorable school belonging and perceptions that peers would protect against bullying. Third, in a pair of Appalachian schools, teachers in the school that received directed consultation reported a sustained sense of efficacy to meet the needs of their students including struggling learners while teachers in the control school had a decreasing sense of efficacy (Farmer, Hamm, et al., 2010). Differences were also found in the peer culture, as students in the intervention school were more likely to view peers as being supportive of academic effort and achievement. Furthermore, aggressive students in the BASE school were more likely to develop affiliations with productive peers and less likely to affiliate with peers who were identified as bullies and victims.

The impact of directed consultation and the BASE program on teachers' capacity to promote positive classroom contexts appears to be evident in students' academic, behavioral, and social outcomes. A study in the Northern Plains involved two intervention and control schools attended by Native American and White students (Hamm et al., 2010). Although students were comparable in fifth grade, by the end of sixth grade, students in the BASE schools experienced higher grades, a more favorable valuation of school, and perceptions that their schools were less supportive of bullying and victimization, as compared with students in control schools. Most notably, Native American students in BASE schools attained higher state-level standardized test scores, and reported a more favorable sense of school belonging, less emotional risk in classroom participation, and greater peer support for effort and achievement as compared with students in control schools. The impact of directed consultation and the BASE model are also evident in studies with the full sample. In a study focusing on the academic peer culture, students' peer groups were more likely to be characterized by favorable norms for effort and achievement in schools where teachers received directed consultation in the BASE model as compared with peer group norms in control schools. In BASE schools, popularity was more favorably associated with effort and school valuing, whereas students in control schools experienced more social costs for their effort and school valuing (Hamm et al., 2014). In another study focusing on aggression, peer cultures were less supportive of aggression in BASE versus control schools (Farmer, Hamm, Chen, & Irvin, 2014). Students who were identified by peers as more popular and more fully integrated into the social network were less aggressive in BASE schools as compared with control schools. Likewise, students in BASE schools, as compared with control schools, were more likely to report they would intervene in bullying. Finally, in BASE schools as compared with control schools, students with exceptionalities, including both students with disabilities and academically gifted students, indicated that they perceived that peers were less likely to encourage classmates to bully them (Chen, Hamm, Farmer, Lambert, & Mehtaji, 2015).

Supported Professionalism and Adaptive, Data-Driven Practices

As federal and state policies focus on standardized curricula and assessments, many teachers experience what has been termed "constrained professionalism" (Wills & Sanholtz, 2009). Constrained professionalism refers to teachers' development of a mind-set that they have limited capacity and support for making decisions about their teaching and do not have the latitude to adapt instruction based on their own professional judgment of what students need. Yet, many rural teachers, particularly rural special educators, by necessity find innovative ways to use the

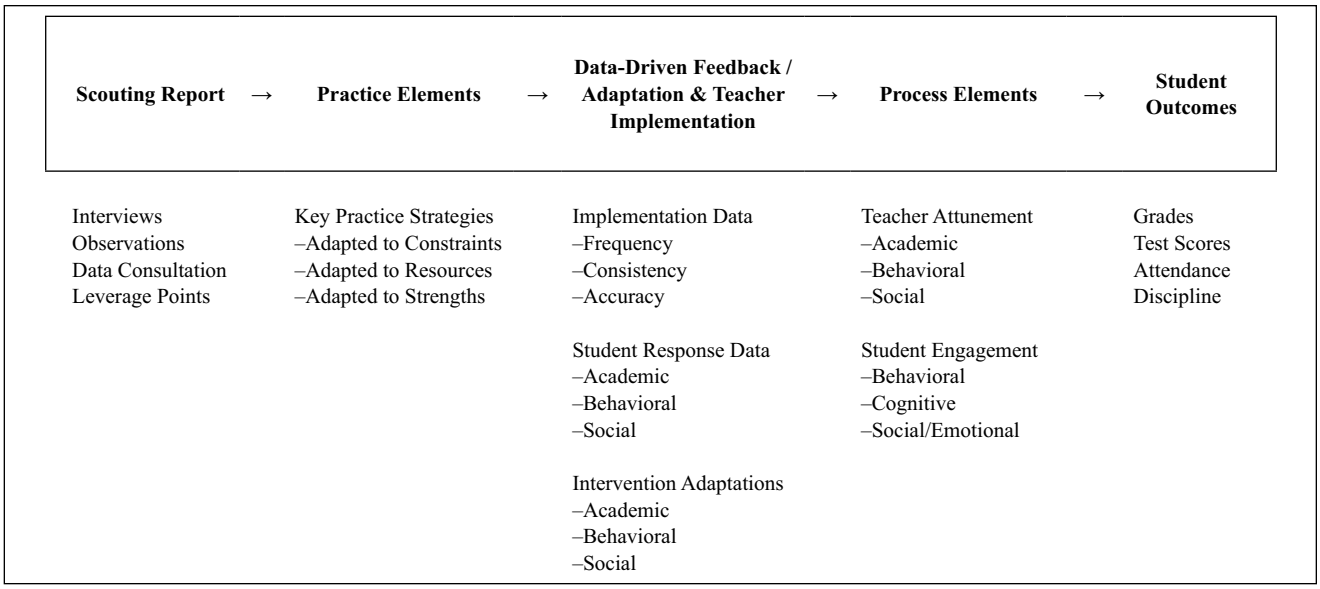

Figure 2. Directed consultation partnership model of supported professionalism.

resources available to them to work around the constraints they may experience. These innovative professionals tend to have both the drive and skills to find solutions to bridge between the knowledge base and the real-world situations they experience as they serve diverse learners in low-resource settings (Berry et al., 2011; Mariage & Garmon, 2003; Weiss et al., 2014). Innovative teachers desire professional support and guidance not because they struggle with their jobs, but because they are professionals who seek to enhance their ability and capacity to serve students who have unique challenges.

Professional development frameworks are needed that involve establishing supportive partnerships with rural teachers to assist them as they use data to adapt EBPs to meet the needs and specific circumstances of their students and schools (Berry, 2012; Maggin, Wehby, Farmer, & Brooks, 2016). We view such partnerships as "supported professionalism." In supported professionalism, the teacher brings expertise about the student, context, and available resources to the partnership while the intervention specialist brings expertise in a range of EBPs and the use of data to adapt these practices. Together, the teacher and the intervention specialist work through potential solutions, the teacher implements adapted strategies, and data are collected to assess and guide further refinement of the intervention (Farmer, Chen, et al., 2016).

Rethinking EBPs

The concept of supported professionalism is not in conflict with EBPs, but it does require reframing how they are conceptualized. A general view is that EBPs involve manualized protocols that must be adhered to strictly (i.e., implemented with fidelity). Yet, there are not EBPs for each specific situation a teacher encounters and teachers must work within the circumstances of the context and the limits of the evidence-base (Maggin, Wehby, Farmer, & Brooks, 2016). This point is particularly important for the use of tiered-levels of support and it suggests that adjustments may be made within as well as across universal (Tier 1), selected (Tier 2), and targeted (Tier 3) levels (Farmer et al., 2018). Modifications may be required to accommodate specific learners at each tiered level of MTSS (Maggin, Wehby, Farmer, & Brooks, 2016; Sutherland et al., 2017). This involves experimentation to make minor adjustments to a practice and to collect data to clarify how the practice may be most effective with the student (Castro, Barrera, & Martinez, 2004; Farmer, Sutherland, et al., 2016; Ludlow, 2014). In instances where the student is generally not responsive to a practice, there is a need to intensify intervention to address the specific needs of the student and/or context factors that contribute to the student's functioning and school adjustment (Danielson & Rosenquist, 2014; Wehby & Kern, 2014). As depicted in Figure 2, supported professionalism involves an intervention specialist working in partnership with a teacher to identify needed adjustments and their implementation within EBPs. To do this, the concepts of practice and process elements are critical, as are adaptive expertise and data-driven practices.

Practice and Process Elements of Evidenced-Based Programs

The concept of practice elements has emerged in the implementation science literature to refer to discrete principles or skills that tend to serve as core features within multiple evidence-based programs in community settings (Institute of Medicine, 2015). The importance of this point is that it

acknowledges that evidence-based programs within the same domain (e.g., instructional approaches, classroom management, social skills interventions) or content area (e.g., reading, math, science) tend to share common elements. On this count, practice elements can be viewed as evidence-based kernels of specific skills or strategies that are common across treatment protocols and that are considered to be associated with specific outcomes of interest (Chorpita & Daleiden, 2009; Embry & Biglan, 2008). The concept of practice elements suggests that core strategies can be identified that represent a general set of EBPs and these elements can be modified to be responsive to the characteristics of the student, the context, and the background and experiences of the teacher (Farmer, Sutherland, et al., 2016; McLeod et al., 2017). Specifically, the practice element components of manualized interventions can be tailored in terms of quantity, quality, and delivery approach, and teachers can select the components they believe are most critical or relevant to the student and/or the circumstances (Castro et al., 2004; Durlak, 2010).

Process elements refer to key developmental factors and experiences that contribute to students' adjustment and adaptation in the school setting and that mediate or moderate outcomes such as school grades, attendance, discipline problems, and standardized achievement scores (Farmer, Sutherland, et al., 2016). An important aspect of this perspective for supporting students with disabilities in rural schools is that it involves the interplay between the characteristics of the student, the ecology (e.g., peer group, classroom, school, family, community), and teachers' capacity and resources to manage the interplay between the two (Bronfenbrenner, 1996; Hamm & Hoffman, 2016). Because development tends to operate as a dynamic system with multiple factors contributing to students' adaptation and outcomes, it is possible to intervene at multiple entry points in the system as long as the intervention fosters the positive organization and alignment among factors (Farmer et al., 2013; Magnusson & Cairns, 1996). Everyone does not have to do things exactly the same way to get the same outcome. Rather, interventions can be tailored to the student, teacher, school, and community (Farmer, Sutherland, et al., 2016).

Adaptive Expertise and Data-Driven Interventions

Two types of teaching expertise have been identified: routine and adaptive (De Arment et al., 2013; Mason-Williams et al., 2015). Routine experts are teachers who center on procedural knowledge and have established specific ways to perform their duties and deliver instruction to foster efficiency in classroom practices and activities. These teachers tend to follow the same strategies/approaches with all students and, if adjustments are made, they tend to be at the level of the student adapting to the teachers' classroom structure, expectations, and practices. Adaptive expertise involves experimentation and flexibility to find the best strategies and pathways to success for students according to their individual strengths and needs. These individuals are problem solvers who continually consider new approaches to address the interplay of the features of the student and the learning environment. Adaptive expertise is considered to be the "gold standard for becoming a professional" (Hammerness, Darling-Hammond, & Bransford, 2005, p. 360).

The concept of adaptive expertise is particularly relevant for rural special education teachers. The Individuals With Disabilities Education Act (IDEA; 2004) is undergirded by the principle that intervention involves continuous progress monitoring and data-driven adaptation to provide individualized supports and services for students with disabilities (Ludlow, 2014). By the very nature of their professional responsibilities, special educators need to be adaptive experts who have the capacity, skills, and knowledge to guide adjustments in the content and delivery of services for students with disabilities (De Arment et al., 2013; Mason-Williams et al., 2015; Wehby & Kern, 2014). Furthermore, in rural settings, special educators are often responsible for providing consultation support and guidance for their general education colleagues and they are expected to have a broad range of knowledge to guide intervention development and adaptation for students who have needs that may go beyond their own training and experience (Berry, 2012; Weiss et al., 2014). To fulfill this role, rural special educators need professional development, consultative support, and technical assistance to promote their use and adaptation of EBP and delivery frameworks (Berry, 2012; Mason-Williams et al., 2015).

Directed consultation is well suited to provide this assistance and support to rural special education teachers by establishing a framework for embedded training, support, and consultative collaboration in the intensification of interventions for students with disabilities. Intervention intensification involves using progress monitoring data (i.e., observations of teacher practice, student response to specific strategies, student achievement indicators) to make individualized decisions to adjust interventions to a student's needs and performance (Danielson & Rosenquist, 2014; Fuchs & Fuchs, 2015; Kern & Wehby, 2014). By approaching data-driven adaptation of EBPs from the vantage of supported professionalism, directed consultation should promote the adaptive expertise of rural special educators and should serve as a resource to help them become intervention specialists who use data to guide a broad range of support to their general education peers (Farmer, Sutherland, et al., 2016). Therefore, although rural special educators can serve as adaptive experts to guide intervention intensification and service delivery, to do this they need access to a range of evidence-based content, adaptive strategies, and an infrastructure for external professional support to assist them in the performance of this role.

The Need for Rural Research-Practitioner Partnerships

In many respects, the directed consultation process is simultaneously a professional development model and an intervention development research framework. The focus of directed consultation is on creating a flexible professional development structure, process, and library of associated evidenced-based strategies that are responsive to local circumstances and needs. Yet, the activities involved in working with rural schools to provide professional development and consultation support become an opportunity to collect data and establish a framework for research-practitioner partnerships for the development of data-driven adaptive interventions. The constraints and ingenuity required to provide special education in rural schools can be viewed as an opportunity for innovative research to create new perspectives, infrastructure supports, and approaches that can promote more effective programs and individualized interventions to enhance the school adjustment of all students regardless of ability and location.

Historically, the relevance of research for practitioners has been a critical but somewhat elusive focus for educational scientists (Snow, 2016). Efforts to create linkages between basic and applied research include such concepts as implementation science, bridging the research-to-practice gap, translational research, evidence into practice, and improvement science (Bryk, 2015; Donovan, Snow, & Daro, 2013; Greenwood & Abbott, 2001). In the past decade, researchers have recognized a need to move beyond the traditional separation of research and practice by shifting from research to practice and translational research paradigms and establishing a new paradigm of practice-embedded research (Snow, 2015). This work has involved the development of the concept of Strategic Education Research Partnerships (SERP: Donovan et al., 2013). Building from efforts of the National Academy of Science to integrate education research, practice, and design, the SERP framework involves partnerships between researchers and practitioners, centering activities on urgent problems of practice, focusing attention on both innovations and their implementation, and attending to systemic change (Snow, 2015). The critical point of the SERP perspective is that learning from practice in authentic settings is fundamental to educational research.

As work in the development of research-practitioner partnerships move forward, there is a need to blend research-based practices and practice-embedded research (Olszewski-Kubilius & Steenbergen-Hu, 2017). Directed consultation is designed specifically to do this. Reflecting the practice-embedded research paradigm and principles of SERP, directed consultation involves establishing a partnership between practitioners and researchers, it focuses on urgent issues of practice as identified by stakeholders in authentic settings, centers on both practice innovation and implementation, and is situated within the unique ecological context of classrooms, schools, and communities in which the work is conducted (Farmer et al., 2013; Motoca et al., 2014). Furthermore, directed consultation focuses on the interplay between evidence-based strategies and the use of context-based, near real time data to guide teachers in the adaptation of their practice to the specific strengths, resources, and constraints they experience as they work to meet the needs of specific students (Farmer, Chen, et al., 2016; Farmer & Hamm, 2016; Farmer, Sutherland, et al., 2016). The goal is to establish content, a framework, and supports that foster the adaptive expertise and supported professionalism of teachers and related specialists in rural schools.

Conducting directed consultation as a research-practitioner partnership to support rural special educators should enhance education practice and research in several ways. First, it should promote more targeted, continuous, and effective training and support for rural special educators who are responsible for meeting the needs of a broad range of diverse learners. Second, because they experience limited resources and constraints as they serve their students and provide support for general education colleagues, rural special educators are in a position to foster innovation in both practice and service delivery. Practice innovations growing from directed consultation should provide new insights into both the development of adaptive expertise and the creation of professional development and consultation strategies to help teachers become adaptive experts. Third, service delivery innovations that emerge in directed consultation provide insights for the establishment of new technologies, infrastructure supports, and organizational frameworks to enhance the delivery of both professional development training and special education services in rural schools. Fourth, practice and service delivery adaptations used in directed consultation promote the continuous creation of new content for a comprehensive library of evidence-based strategies and modifications that can be utilized as a resource in both rural and nonrural schools across the country. Fifth, when combined, rural education and special education services provide a natural laboratory for research-practitioner partnerships aimed at fostering innovation because they each require adaptive approaches to education. Thus, research-practitioner partnerships that use directed consultation to support special education delivery in rural schools should provide fertile ground for generating new ideas, strategies, and content for all of education.

When the five points above are considered together they collectively suggest that directed consultation within a research-practitioner partnership framework should yield new insights and approaches for supporting rural special education. Common constraints and distinct but shared uniqueness of rural sites across the United States provide an

excellent opportunity to establish SERPs (Donovan et al., 2013) or Networked Improvement Communities (NICs; Bryk, 2015) that bring together the expertise of practitioners, researchers, designers, and technologists to promote improvement in educational practice (IES, 2014). We propose that rural special education can be enhanced by the creation of a SERP or NIC that links research-practitioner partnerships either regionally or nationwide to promote the data-driven adaptation of EBPs, a framework for fostering supported professionalism, and dynamic service delivery infrastructures that are responsive to the unique needs of specific rural schools and the students they serve. We also propose that directed consultation provides a useful framework to guide practice-embedded research activities, data collection, and service delivery innovations central to such partnerships.

In conclusion, rural special education can be both a challenge and an opportunity. Many rural special educators work in near isolation in settings that have limited supports and resources necessary to perform their work. Yet, rural special educators are often resilient professionals who seek out guidance and find innovative ways to meet their students' needs while supporting their colleagues. Within this context, there is a critical need for a professional development and consultation framework to help rural special educators use and adapt EBPs to the circumstances of their schools and students. Directed consultation has the potential to be such a framework. It is well suited to be used in NICs that focus on practice-embedded research to generate data and innovations to foster adaptive expertise in rural special education teachers and a climate of supported professionalism in rural schools. Rural special education is uniquely positioned at the edge of innovation and there is a pressing need to establish research-practitioner partnerships to leverage the distinctive potential of rural special education to spawn new knowledge, delivery frameworks, and practice improvements to enhance all of education.

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