Leveraging Evidence-Based Practice through Partnerships Based on Practice-Based Evidence

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Evidence-based practice is among the most influential and compelling reforms in contemporary education. Despite their potential to improve the outcomes of students with disabilities, adoption and implementation of evidence-based reforms have been disappointing, with the gap between research and practice remaining wide. Practice-based evidence provides an alternative perspective on evidence grounded in the realities of class-room teaching in authentic settings, which practitioners find compelling when making instructional decisions. We propose that practitioners and other special education stakeholders (e.g., researchers) can form partnerships around practice-based evidence to leverage the implementation of evidence-based practice, and provide examples of such partnerships.

Keywords: **Evidence-based practice, practice-based evidence, partnerships**

INTRODUCTION

Evidence-based practice is a decision-making process that integrates: (a) the best available research evidence, (b) the values and goals of learners and their families, and (c) practitioners' professional judgment (Spencer, Detrich, & Slocum, 2012). Supported by federal legislation in the United States (e.g., Every Student Succeeds Act, 2015; Individuals with Disabilities Education Improvement Act, 2004), evidence-based practice "has become one of the most influential policy constructs in the field of special education" (Hudson et al., 2016, p. 34). Evidence-based reforms and their emphasis on using scientific evidence to inform instructional decision making are important in special education given that: (a) students with disabilities require highly effective instruction to reach their potential (Vaughn & Dammann, 2001), and (b) the instruction of students with disabilities has been negatively influenced by fads and ineffective practices (e.g., Foxx & Mulick, 2016; Kavale & Mostert, 2004). Yet despite the potential benefits of evidence-based reforms, to date they have had limited impact on practice.

Special education is a complex, diverse field that provides an array of services to support learners with disabilities achieving goals related to social, behavioral, functional, and academic outcomes. Because no one group of stakeholders can adequately meet the educational needs of learners with disabilities alone, effective special education necessitates partnerships—which we define as two or more groups allying resources and expertise to achieve goals that cannot be realized independently (Barnett, Hall, Berg, & Camarena, 1999). For example, partnerships between special educators and families, general educators, providers of related services, and admin-

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istrators contribute to improved services and outcomes for learners with disabilities. Indeed, the Individuals with Disabilities Education Improvement Act (2004) requires that special educators, general educators, administrators, parents, and related service providers work as partners to fashion Individualized Education Programs (IEPs).

However, practitioners have typically been asked to implement evidence-based practice with limited supports or partnerships beyond in-service trainings on specific instructional techniques. Just as in other areas of special education, partnerships may be necessary to achieve evidence-based practice. In this paper, we explore the notion of practice-based evidence (i.e., evidence derived from real-world settings and practitioners) as a means to foster partnerships between special educators and other stakeholders (e.g., researchers) to advance evidence-based practice. In the following sections, we (a) describe evidence-based practice and its limited implementation, (b) introduce the idea of practice-based evidence, (c) discuss how practice-based evidence complements evidence-based practice, and (d) provide examples of partnerships that use practice-based evidence to leverage increased implementation of evidence-based practice.

Evidence-Based Practice: The Potential and the Pitfalls

Evidence-based practice is a decision-making process that grounds the selection, implementation, and evaluation of instructional practice in sound evidence (Spencer et al., 2012). The first step in the process, identifying an appropriate practice, involves selecting a practice that (a) is supported as effective by the best available research evidence, (b) is consistent with the goals and values of learners and their families, and (c) accords with the teacher's professional judgment. The next steps involve applying the selected practice with fidelity (i.e., adhering to the critical elements of the practice; O'Donnell, 2008) and collecting reliable, formative assessment data to gauge the practice's impact on student performance. If data indicate that students' performance is not improving satisfactorily, the teacher makes sure the practice is being implemented as designed and, if so, considers whether and how to adapt non-essential aspects of the practice to better meet students' unique needs (see Torres, Farley, & Cook, 2012).

Though the process of evidence-based practice involves multiple steps and decisions (e.g., examining the fit of a practice for one's students, implementing the selected practice with fidelity, assessing the impact of a practice for individual learners), the classification of instructional practices as evidence based (or not) has been the primary focus of scholars and policymakers (e.g., Cook, Tankersley, & Landrum, 2009; Council for Exceptional Children, 2014; National Autism Center, 2015; Slavin, 2008; What Works Clearinghouse, 2014). This focus reflects the importance of using practices shown by reliable research to work. To minimize the likelihood of false positives (i.e., identifying practices as effective that actually are not), educational scholars have suggested that only the most internally valid types of research evidence be used to determine the effectiveness of instructional practices (Cook & Cook, 2013). Specifically, using evidence from multiple, high-quality experimental studies to identify practices as evidence based maximizes the odds that identified practices actually are effective. Although the emphasis on rigorous experimental research designs and internal validity is well suited for examining the general efficacy of practices, it has

not translated into broad support and implementation of evidence-based practice among practitioners.

Despite more than a decade of evidence-based reforms, a prominent research-to-practice gap continues to exist in special education whereby teachers infrequently use some empirically-validated practices (e.g., mnemonic strategies) yet commonly implement other practices not supported as effective by research (e.g., modality instruction; see Burns & Ysseldyke, 2009; Carter, Stephenson, & Strnadová, 2011; Gable, Tonelson, Sheth, Wilson, & Park, 2012). We contend that the emphasis on rigorous research, internal validity, and experimental trials in evidence-based reforms contributes to the research-to-practice gap and disappointing implementation of evidence-based practice by disaffecting many practitioners—the very people depended on to implement evidence-based practice (Smith, Schmidt, Edelen-Smith, & Cook, 2013).

Many practitioners perceive evidence-based practice as a "top-down" approach derived from the results of studies that, though internally valid, do not reflect the complex and unique contexts in which they teach (Boardman, Arguelles, Vaughn, Hughes, & Klingner, 2005; Hudson et al., 2016; Jones, 2009). Accordingly, special educators do not see the conclusions drawn from research about the effectiveness of instructional practices as applying to the unique needs of their students with disabilities. As one teacher noted about evidence-based practice,

> I think a lot of it is just too much talk. I mean they can't say that one thing will work best in this classroom. I mean the research stuff looks good down on paper, but whenever you actually use it in a classroom, it doesn't really … I mean it may not fit with each student. (Jones, 2009, p. 110)

Practitioners consider research evidence relevant when it is connected in a meaningful way with their specific situation (Simons, Kushner, Jones, & James, 2003). As such, evidence from rigorous, internally valid, experimental research, which often involves specially trained researchers implementing interventions and other supports and resources not typically found in everyday classes, may be perceived as irrelevant. As evidence-based practice is closely associated with this type of research, many special education teachers appear to view it as disconnected to the real world of teaching as well.

Due to special education practitioners' concerns about the relevance of experimental research and evidence-based practice, it is perhaps not surprising that evidence-based reforms have had limited impact on teaching practices. Indeed, rather than foster partnerships between researchers and practitioners, evidence-based reforms may have evoked a negative reaction from practitioners who feel that outsiders (i.e., researchers and policymakers) are attempting to dictate what and how they should teach. Although it is possible that more and better teacher preparation, professional development, and policies promoting research and evidence-based practice may prove effective, we believe that more of the same is unlikely to change the course. We propose that a different perspective on evidence can be used to develop critical partnerships that leverage increased use of evidence-based practice.

PRACTICE-BASED EVIDENCE: AN ALTERNATIVE PERSPECTIVE

Evidence-based reforms involve using evidence from rigorous, internally valid, experimental studies to establish the efficacy of practices and programs. These efficacy studies provide valid evidence regarding whether a practice causes improved performance for a population of learners because they control for alternative explanations of findings. For example, they do this by randomly assigning participants to groups, including only participants who meet inclusion criteria (e.g., disability type, functioning level), and ensuring a high level of adherence to a treatment protocol. Indeed, to maximize control in efficacy studies, researchers (rather than classroom teachers) often deliver the practice, and the practice is sometimes implemented in controlled settings rather than typical classrooms. In sum, efficacy studies attempt to control for contextual "noise" to isolate the effect of the treatment. However, this unpredictable noise is part of the real experience of implementing instructional practices in classrooms. As Green (2006) noted, the problem with evidence from efficacy studies is that it is not practice based; it does not reflect the realities of classrooms and teachers (see also Horn & Gassaway, 2007).

In contrast with notions of efficacy, rigor, and internal validity associated with evidence-based practice, practice-based evidence emphasizes real-world effectiveness, relevance, and external validity (Barkham & Mellor-Clark, 2003; Smith et al., 2013). As the phrase implies, practice-based evidence is derived from real-world settings and practitioners (e.g., teachers and classrooms), with all their inherent complexities and challenges (Bagnato, McLean, Macy, & Neisworth, 2011). In practice-based evidence, "the real, messy, complicated world is not controlled. Instead, real world practice is documented and measured, just as it occurs, 'warts' and all" (Swisher, 2010, p. 4). Accordingly, practice-based evidence provides experiential (i.e., evidence that a practice is supported by real teachers) and contextual (i.e., evidence that the practice is effective in real classrooms) evidence (see Puddy & Wilkins, 2011), both of which are important to teachers when making instructional decisions.

Practice-based evidence can take many forms. Virtually any type of research can provide practice-based evidence if it reflects the real world of teachers and classrooms. For example, quasi-experimental group studies and single-case designs generate practice-based evidence if they involve teachers implementing an intervention under typical conditions. Post-hoc single-group effectiveness studies, case studies, qualitative research, narrative reports, participatory action research, and informal classroom research might also yield practice-based evidence, so long as they investigate the real world of practice (Evans, Connell, Barkham, Marshall, & Mellor-Clark, 2003; Horn & Gassaway, 2007; Leeman & Sandelowski, 2012; Simons et al., 2003).

It is important to recognize that practice-based evidence is not simply a less rigorous version of efficacy research. Rather, efficacy research and practice-based evidence serve two different purposes. Whereas efficacy research establishes whether a practice can work for a population (under ideal conditions), practice-based evidence is concerned with examining whether and how a practice works in specific, authentic settings. As such, practice-based evidence is situationally bounded, examining "what is credible for these pupils in this classroom in this school in this city" (Simons et al., 2003, p. 356; see also Horn & Gassaway, 2007). Indeed, Kratochwill et al. (2012) suggested that the roles of efficacy research and practice-based evidence are orthogo-

nal, or independent of one another. In practice-based evidence, contextual and social validity are prioritized (which is not a goal in efficacy studies), with internal validity (the primary aim of efficacy studies) playing a subordinate role.

Practice-based evidence can serve a number of purposes in special education. Perhaps most obviously, it examines the effectiveness of a practice as implemented by real teachers in real settings. It often takes place after efficacy studies have established a practice as efficacious in order to investigate whether and how the practice works in specific, day-to-day contexts. However, practice-based research can also be conducted before efficacy studies in order to identify practices that appear promising under typical conditions. Identifying promising practices should lead to further investigation by more resource-intensive efficacy studies to more conclusively determine whether they cause improved learner outcomes. Practice-based evidence also provides important information that is often not examined in efficacy studies, such as whether and how a practice works with different subgroups of learners, identifying obstacles and facilitators of implementing and sustaining a practice, whether and how a practice works when brought to scale, investigating how teachers adapt a practice, and providing concrete examples of how a practice works in real life (Kratochwill et al., 2012).

Examples of Practice-Based Evidence in Special Education

Given the applied nature of special education, studies generating practice-based evidence are common in the professional literature. In this section, we briefly discuss a few of these studies, highlighting the unique contributions of practice-based evidence from each.

Balu and colleagues (2015) conducted a study on the impact of Response-to-Intervention (RtI) in a large sample of elementary schools in 13 states. The authors noted that,

> This study is unique in the sense that it examines the RtI system as it operated in multiple states in a large sample of experienced schools that had implemented RtI on their own, without monitoring or support from researchers. This is different from most existing efficacy studies, in which the scale of the treatment is small (usually samples consist of fewer than 100 students and only a handful of schools) and the design and implementation of the RtI interventions are closely controlled by the researchers. (p. ES-17)

One aspect of Balu and colleagues' (2015) larger study compared the outcomes of students whose screening scores were just low enough to qualify them for RtI interventions to those of students who barely did not qualify (using a regression discontinuity design) in 146 schools that had been using RtI for at least 3 years. No significant effects of RtI interventions were found in grades 2 and 3, and a *negative* effect of RtI was reported in 1st grade. The authors speculated that one potential explanation for their findings is that, in the real world, supplemental reading interventions may be poorly aligned with schools' core reading programs—reducing the benefit of the supplemental programs found in efficacy studies. Additional, practice-based research should examine possible factors associated with the observed ineffectiveness of RtI in typical schools.

Santangelo (2009) conducted a qualitative case study to examine the implementation of collaborative problem solving (CPS) for the purpose of reducing referrals to special education in one elementary school. During the first year of implementation, grade level teams were formed and met regularly to generate, implement, and evaluate strategies for addressing the needs of struggling students. The interventions developed by the teams led to a drastic reduction in referrals to special education from the previous year. However, in the second year, due to the lower number of students in special education, special education staffing was reduced at the school. Furthermore, funding used to provide substitute teachers while CPS team members met was eliminated by the district. CPS team meetings became unstructured and disorganized in Year 2 and seldom resulted in teachers implementing an intervention or collecting data as they had in the previous year. Referrals to special education spiked in Year 2, surpassing numbers before the school adopted CPS. The practice-based evidence generated from this study highlights the importance of district-level support and other contextual factors in sustaining initially successful interventions that would not have been discovered in a typical efficacy study.

Musti-Rao, Hawkins, and Barkely (2009) investigated the impact of one 4th-grade teacher's implementation of peer-mediated repeated reading on 12 diverse students at risk for reading failure (some of whom were identified as having a learning disability) using a multiple baseline across participants design. The researchers provided initial training to students (two 15-min sessions) and led the first session of repeated reading. After that, the classroom teacher independently conducted all repeated reading lessons under typical conditions. Over a six-week period, the teacher was observed to implement 98.6% of critical steps in repeated reading instruction. Compared to baseline, repeated reading resulted in a 40% increase in words read correctly per minute across the 12 students. Additionally, the teacher rated repeated reading as easy to implement, improving students' overall performance, and something she would use again and recommend to others. Because the teacher implemented and evaluated the intervention in an authentic setting, the study provides practice-based evidence that demonstrates the feasibility and effectiveness of repeated reading in this context.

Although seldom identified as such, the special education research base contains many studies that provide practice-based evidence by involving typical special educators working under typical conditions. Although two of the studies we briefly reviewed used designs that can establish causality (regression discontinuity, multiple baseline), many do not. The objective of practice-based evidence is not to establish whether a practice is generally effective through internally valid studies. Rather, the purpose is to provide information about how practices work in real-life settings. Regardless of the research design used, practice-based evidence provides a different and complementary type of evidence that can help form bridges and partnerships between practitioners and other stakeholders to leverage increased application of evidence-based practice.

EVIDENCE-BASED PRACTICE AND PRACTICE-BASED EVIDENCE:
## A CONCEPTUAL PARTNERSHIP

Practice-based evidence and evidence from rigorous efficacy trials serve two different purposes, each necessary but insufficient for achieving broad implementation of evidence-based practice. Despite, or perhaps because of, their differences, they make compelling complements to one another. Our enthusiasm for practice-based evidence notwithstanding, we want to be clear that it has critical limitations when considered in isolation—the foremost being the lack of attention to internal validity. Most practice-based research (e.g., case studies, qualitative research, AB single-case designs) does not establish whether the practice actually caused gains in student performance (i.e., whether the practices actually work). Even if outcome data show that student performance improved subsequent to a practice being implemented by a real teacher in an authentic setting, most practice-based research is not designed to rule out the possibility that some other variable was responsible for the change in outcomes. Controlling for alternative explanations and threats to validity is a strength of internally valid efficacy studies. Without being paired with sound, experimental research, practice-based research can be misleading, potentially suggesting that ineffective practices work.

Efficacy trials have important limitations when considered in isolation as well. Though they can establish that a practice caused generally improved outcomes for a sample of learners in controlled settings, they do not indicate whether the practice will work for other learners and in other settings, whether teachers will be able to implement and sustain the practice under typical conditions, or how teachers may adapt the practice (Bower, 2003). Additionally, internally valid efficacy trials do not resonate with teachers, who are ultimately charged with implementing the practices being investigated. Teachers value evidence from other teachers "in the trenches" working with students and in classrooms similar to their own (Boardman et al., 2005; Landrum, Cook, Tankersley, & Fitzgerald, 2002, 2007). As such, without being paired with practice-based evidence, evidence from internally valid, experimental studies often exists solely in the academic realm—generated and consumed primarily by researchers with little impact on actual classroom practice (see Hambrick, 1994).

Practice-based evidence and evidence-based practice, then, appear to form a compelling partnership—both incomplete in isolation, but the strength of one compensating for the weakness of the other. As Shulman (2004) noted about different types of assessments, practice-based evidence and evidence from rigorous efficacy trials, though each insufficient in isolation, "form a union of insufficiencies, a marriage of complements" (p. 355) when partnered (see also Swisher, 2010). Kovacs (2015) suggested that the partnership results in a virtuous cycle in which practice-based evidence informs evidence-based practice, which in turn informs practice-based evidence, and so on (see Figure 1 for a graphical representation). For example, practice-based research might document that teachers perceive an instructional practice to be useful and feasible. Experimental trials can then determine whether the practice actually causes improved learner outcomes under controlled conditions. Practice-based research can then explore whether the practice works in specific classrooms with specific students. Although the partnership between evidence-based practice

and practice-based evidence is potentially compelling, it will require real-life partnerships between special education stakeholders to be actualized.

Figure 1. **The cyclical relation between practice-based evidence and evidence-based practice.**
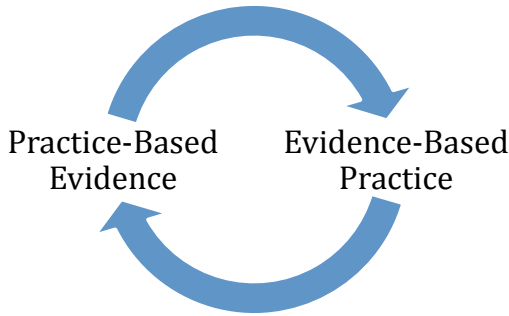
Partnerships between Practitioners and Other Stakeholders

The top-down approach of researchers and policy-makers prescribing evidence-based practice to practitioners has not resulted in widespread implementation. Using practice-based evidence to leverage evidence-based practice opens the doors for partnerships between practitioners and other stakeholders (e.g., researchers; Kratochwill et al., 2012) that can provide a bottom-up component to evidence-based practice. In this section, we discuss examples of partnerships in which practitioners, researchers, and other stakeholders work together to use practice-based evidence to leverage evidence-based practice in the areas of practice, professional development, dissemination, teacher preparation, and policy.

Community of Practice

A primary obstacle to implementing empirically-validated practices is difficulty in fitting them to the unique contexts of actual schools and classrooms. Communities of practice (Wenger-Trayner & Wenger-Trayner, 2015) provide a framework for partnerships that can guide implementation of evidence-based practice in real-world settings. Communities of practice can take many forms, but often involve members with different types and levels of expertise (e.g., practitioners and researchers). Specifically, communities of practice provide opportunities for researchers and practitioners to collaboratively generate practice-based evidence to leverage evidence-based practice (McDonald & Viehbeck, 2007); or, as Buysse, Sparkman, and Wesley (2003) phrased it, for "connecting *what we know* through research with *what we do* in special education" (p. 265, italics in original).

Palincsar, Magnusson, Collins, and Cutter (2001) described a community of practice including 18 elementary teachers and researchers from a local university with the goal of determining "the range of teaching practices that promote children's inquiry-based learning of scientific understandings" (p. 17). Under the guidance of the researchers, the community of practice conducted a multiphase design experi-

ment to generate practice-based evidence to guide implementation of an empirically-validated practice selected by the teachers. Phase 1 of the study was a mixed-methods investigation to examine the experiences of included students with disabilities in participating teachers' classrooms (primarily students with learning disabilities) being taught science through inquiry-based learning. Through observations, formal assessments of student performance, interviews with students and teachers, student artifacts (e.g., student notebooks), and field notes, the researchers identified opportunities and challenges for included students with disabilities. Opportunities included iterative experiences to promote depth of understanding, acceptance of diverse ways of thinking, and a broad range of ways to represent thinking. Challenges included difficulties sustaining attention, social-relational problems, and high cognitive and linguistic demands.

In Phase 2 of the project, researchers and teachers collaboratively discussed how they could adapt inquiry-based instruction to capitalize on the opportunities and address the challenges identified in Phase 1. The community of practice developed adaptations in three main areas: (a) monitoring and facilitating student thinking (e.g., engaging in mini-conferences with target students), (b) supporting print literacy (e.g., providing a glossary of terms), and (c) improving working in groups (e.g., monitoring interactions and providing feedback). Pretest-posttest comparisons of student performance on a researcher-made assessment—disaggregated for typical achievers, low achievers, and target students with disabilities—were conducted in both Phase 1 and Phase 2. Although findings varied across classrooms, increases in student performance were more dramatic (and reached statistically significant levels) for more groups of learners, including low achievers and students with disabilities, in Phase 2.

Rather than feel that evidence-based practice was being dictated to them in a top-down fashion, teachers in this community of practice partnered with researchers to generate practice-based evidence to leverage evidence-based practice. Although the practice-based evidence gathered by the researchers (e.g., qualitative and quantitative data on opportunities and challenges, reliable student outcome data) was not designed to conclusively determine whether the intervention caused improved outcomes, it provided reliable information that the teachers used to engage in the process of evidence-based practice.

Professional Development

Practitioners are seldom swayed to adopt empirically-validated practices by hearing the results of experimental studies or seeing bar graphs of effects sizes derived from meta-analyses. As discussed previously, this type of evidence is not validated by other teachers "in the trenches" working in similar situations with similar students. As one teacher noted in a study that examined teachers' views of evidence-based practice, "You know, when I see a program, I don't go, 'Let me see your research'; I say, 'Let me talk to your teachers'" (Boardman et al., 2005, p. 176). By partnering with practitioners, professional development providers can use practice-based evidence to make training on empirically-validated practices more relevant and appealing.

Atkins et al. (2008) randomly assigned schools to receive training in 11 recommended strategies for teaching students with ADHD. Mental health providers gave

workshops in the control schools; whereas, teachers in the experimental schools received training from mental health providers and two teachers from their school who had been identified as key opinion leaders (by nominations from teachers of who they most sought out for advice). The key opinion leaders endorsed strategies they found helpful during the trainings. In other words, during trainings, well-respected teachers provided anecdotal practice-based evidence to colleagues supporting the feasibility and effectiveness of the targeted empirically-validated practices. Regression models indicated that, "Teachers' self-report of use of recommended strategies for ADHD was higher in KOL [key opinion leader] schools, relative to comparison schools over the course of 2 years, and these higher rates appeared to be due to KOL support and not to MHP [mental health provider] support" (p. 907). Thus, partnering with practitioners to interject practice-based evidence into professional development resulted in higher levels of evidence-based practice.

DISSEMINATION

Typical research articles and presentations focus on statistical analyses, effect sizes, and other technical information that is neither meaningful nor persuasive for most educators. Thus, a new approach for sharing information about empirically-validated instructional practices is needed (Cook, Cook, & Landrum, 2013). Landrum et al. (2007) demonstrated the persuasiveness of practice-based evidence when disseminating information on effective practices. The authors reported that teachers who read practice-based evidence about the impact of a practice (e.g., a teacher reporting that she had used word banks successfully with over 100 students during the past ten years) rated the practice as significantly more usable than teachers who were presented with data-based evidence on the practice (e.g., a report noting that the use of word banks is supported by over a dozen studies in the last decade using over 100 students). In fact, Smith, Richards-Tutor, and Cook (2010) argued that dissemination of evidence-based practice is incomplete and unlikely to be effective if it does not include stories from practitioners describing how the practice works in the real world (i.e., practice-based evidence).

Maheady and Gard (2010) wrote an article on classwide peer tutoring, an empirically-validated practice, that represents a partnership between a researcher (Maheady) and a practitioner (Gard) that utilizes practice-based evidence to promote evidence-based practice. The authors provided a narrative written by Gard about her experiences implementing classwide peer tutoring alongside procedures for implementing the practice, and theory and research supporting the effectiveness of the practice. Gard presented practice-based evidence related to how the practice addressed the needs of her students, how she adapted the practice (e.g., students graphing their own performance), and improved student outcomes. Researchers partnering with practitioners to include practice-based evidence in research reports, like Maheady and Gard did, enhances the credibility of the research findings and helps make the findings "stick" with practitioners (Cook et al., 2013).

Teacher Preparation

As in other areas of special education, teacher preparation has increasingly focused on evidence-based practice in recent years, with the goal of providing teacher candidates the attitudes, knowledge, and skills to implement empirically-validated practices throughout their teaching careers (Browder, Wood, Thompson, & Ribuffo, 2014; Maheady, Smith, & Jabot, 2013). However, although teacher preparation programs may provide significant training in evidence-based practice during university courses, field work and student teaching appear to be highly influential for teacher candidates (Cook, 2007). Accordingly, if student teaching reflects typical (i.e., not evidence-based) practice, lessons related to evidence-based practice during previous coursework can be quickly undone. Partnerships involving teacher educators, cooperating teachers, and student teachers that generate practice-based evidence can result in a student teaching experience that reinforces, rather than negates, coursework in evidence-based practice.

Mason-Williams, Frederick, and Mulcahy (2015) developed a capstone project for student teaching that developed practice-based evidence for empirically-validated practices. First, student teachers work with cooperating teachers to gather data on the needs of students in their classroom. Then the student teachers consult with university instructors to search the research literature and identify an empirically-validated practice that addresses student needs. Together with their cooperating teacher, student teachers plan how to make the practice work in their particular classroom and for individual students. Once the student teachers begin to implement their practice, they collaborate with their cooperating teacher to collect data on implementation fidelity and student outcomes, and university instructors on how to adapt the practice to maximize its effectiveness for specific learners. By the end of the semester, student teachers have generated considerable expertise and practice-based evidence on the implementation of their selected practice, which they share during presentations at a research forum. Using the capstone project as a nexus for the different areas of expertise of university faculty and cooperating teachers, practice-based evidence is generated that leverages the use of evidence-based practice during student teaching.

Policy

A primary goal of educational policy is to spur and support evidence-based practice in schools. However, a considerable disconnect typically exists between policy and research in education (Berliner, 2008). Berliner noted the example of grade retention (i.e., holding students back a grade). Considerable research suggests that repeating a grade is associated with a host of negative outcomes for students (e.g., higher dropout rates). Nevertheless, national, state, and local policies continue to prescribe holding students back a grade (e.g., for low test scores), resulting in millions of students being retained. More generally, although educational policy often seeks to increase the use of evidence-based practice, it seldom mandates adequate supports for schools and teachers to successfully negotiate the challenges associated with adopting and sustaining evidence-based practice. Partnering policy makers with practitioners through practice-based evidence can help bridge the gap between research and policy.

Based on their review of the systems change literature, Fixsen, Blase, Metz, and Van Dyke (2013) concluded that policy has seldom lead to effective and sustained changes in practice. One commonality among success stories is use of a practice-to-policy communication loop to inform policy decisions with practice-based evidence. It is impossible for policy makers to predict the exact impact of policies or to identify all possible obstacles to realizing policy goals at the outset. As such, policy makers require partners in the field to provide feedback and input. The practice-to-policy communication loop involves policy makers regularly (e.g., monthly) meeting with practitioners to "hear about what is helping or hindering the efforts to make full and effective use of evidence-based programs at the practice level" (Fixsen et al., 2013, p. 216). The practitioners present practice-based evidence (local data, personal experiences) about the real-life impact of existing policies, as well as obstacles to and facilitators of successful implementation, that policy makers can use to inform how they revise and create policy.

In sum, these examples suggest that practice-based evidence can be used as the basis for partnerships between practitioners, researchers, and other stakeholders to promote evidence-based practice in the realms of practice, professional development, dissemination, teacher preparation, and policy. Despite the promise of these types of collaborations, one should not assume that partnerships—especially between groups of professionals with different training, expertise, and traditions—will automatically work. Although the marked differences between groups such as practitioners and researchers present challenges for working collaboratively, they also highlight the potential benefits of such partnerships. That is, whereas partnerships between highly similar groups yield little unique benefit, melding disparate experiences, perspectives, and expertise can attain objectives that neither group could reach alone. Thus, we recommend that special educators devote the leadership, planning, resources, and commitment to these partnerships that they need to succeed (see Barnett et al., 1999). Just as evidence-based practice and practice-based evidence form a powerful partnership for impacting instructional decisions, these two types of evidence can also be used to support and sustain the kinds of partnerships described in this article. That is, we recommend that stakeholders use the best available research evidence on educational partnerships (see Clifford, Millar, Smith, Hora, & DeLima, 2007) in conjunction with practice-based evidence from successful, real-life partnerships to inform the development of their partnership efforts.

Conclusion

Green (2008) suggested that, "if we want more evidence-based practice, we need more practice-based evidence" (p. i23). He argued that researchers and policymakers often believe in the fallacy that practitioners are empty vessels, waiting to be filled with research evidence that will simply translate into implementation of evidence-based practice. In contrast, Green posited that "pull strategies" that make research findings "more relevant, more actionable, more tailored, [and] more particular to … circumstances of practice" (p. i23) are needed for practitioners to engage in evidence-based practice. In this article, we described how partnerships between practitioners and other stakeholders can utilize practice-based evidence to leverage evidence-based practice by making it more relevant, actionable, and tailored.

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