Considering Interest and Action: Analyzing Types of Questions Explored by Researcher-Practitioner Partnerships

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Researcher-practitioner partnerships have gained increasing prominence within education in recent years, yet scholarship on partnerships and tools to guide partnerships' work remain in their infancy. Drawing on our own work in a partnership as well as analysis of abstracts for the 41 partnerships funded by the Institute of Education Sciences and the Spencer Foundation, we analyze the prevalence of four types of research questions—data quality, information gathering, evaluation, and design questions—within partnerships and reflect on the constraints and affordances of each question type for partnerships. We argue that explicitly considering the extent to which possible questions are of high interest and are actionable for both researchers and practitioners may increase the likelihood that the needs of both parties will be met and that partnerships can truly serve as a tool for meaningful improvement in education.

Keywords: educational policy; equity; research methodology; research utilization

Researcher-practitioner partnerships have gained increasing prominence within education in recent years. Funders, specifically the Institute of Education Sciences (IES) and the Spencer Foundation, have created grant programs to support these partnerships.[1] In addition, scholars have begun treating researcher-practitioner partnerships as an object of study, describing various types of partnerships and classifying types of challenges that partnerships may face (e.g., Coburn, Penuel, & Geil, 2013; Coburn & Penuel, 2016). Journals have begun to create special forums for reporting findings from partnerships (e.g., Yakimowski, 2015). Researchers have also articulated a new conceptual framework for understanding the work of partnerships that focuses on participants' joint work at institutional boundaries (Penuel, Allen, Coburn, & Farrell, 2015).

A defining feature of partnerships is that "research priorities are set in response to district [or state] needs" (Coburn et al., 2013, p. 3). To be productive, every partnership must carefully select from among the many research questions they might explore related to a particular problem of practice. Over the past five years, we have collaborated in a researcher-practitioner partnership to analyze outcomes for English learners (ELs) in Oregon. As we reflected on our research questions, we realized that particular question types had particular constraints and affordances (Greeno & Middle School Mathematics Through Applications Project Group, 1998). Findings from some questions had little immediate impact on policy or practice (e.g., because they analyzed past policies that had already shifted by the time results were available) but were valuable to the research community (e.g., because they implemented new methodological approaches). Findings from other questions had immediate impact on policy and practice (e.g., leading to new data collection and reporting practices) but were not likely publishable within a research journal (e.g., because they answered questions that had already been answered many times elsewhere). As we selected questions for future research, we decided to (a) analyze the types of research questions that partnerships, including ours, are pursuing and (b) consider more carefully the constraints and affordances of different question types for partnerships. Our goal is to contribute to the growing scholarship about researcher-practitioner partnerships while also providing a resource and reflection tool for partnerships to use as they craft their research agendas and revise these agendas over time.

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We briefly describe key constructs we used in our analysis, first describing the way we categorized partnership research questions and second describing the constructs of *interest* and *action* that we used to analyze how particular questions might meet the needs of practitioners and researchers. We then provide more detail on our methods, first for our analysis of other partnerships' research questions and second for our use of our own partnership as a case study. Next, we consider each type of research question in turn, discussing its prevalence across partnerships, describing key features of taking up questions of each type within partnerships, and considering the ways in which a question of each type met the needs of practitioners and researchers within our own partnership. Finally, we offer thoughts about the hybrid and iterative nature of partnership research.

Types of Research Questions Within Partnerships

Education research has a history of efforts to delineate types of research questions. For example, in response to stipulation in federal law that "scientifically based" research inform education policy, a National Research Council (NRC) report attempted to codify key scientific principles that should undergird education research and described types of questions that researchers explore (Shavelson & Towne, 2002). Specifically, the report catalogued three types of education research questions: (a) What is happening? (b) Is there a systematic effect? and (c) Why or how is the effect happening? (Shavelson & Towne, 2002). In other cases, scholars have attempted to specify key features of a particular type of research. For example, Johnson (2001) proposed a typology for nonexperimental quantitative research questions based on the research objective (descriptive, predictive, or explanatory) and the time period under study (retrospective, cross-sectional, or longitudinal).

In our analysis of research questions within partnerships, we build on the work of these scholars and others who have categorized types of education research questions. We delineate four types of questions. Table 1 lists each question type along with its frequency across partnerships, a definition, and examples (discussed in more detail later). First, data quality questions provide information about the availability, validity, and reliability of data, answering questions such as: What data do we have? Are these data accurate? and/or What other data do we need? Second, information gathering provides answers to descriptive and/or predictive questions such as: How many…? or What is the relationship between…? Third, evaluation questions ask: What is the effect of this program or policy? Fourth, design questions ask: What new tool or system would address this problem? While we define these four types of questions separately, we see overlap and fluidity among them, with questions of one type often entailing questions of another type, as we discuss in more detail later. In addition, we see the research questions partnerships pursue as dynamic and evolving, with initial answers to questions of one type quickly leading to new questions of a similar or different type. These types of research questions are not unique to partnerships. However, as we discuss later, the structure of partnerships creates particular constraints and affordances for different question types, in part because of the ways in which

different types of questions intersect with the different needs of researchers and practitioners.

Constraints and Affordances of Question Types Within Partnerships: Considerations of Interest and Action

Scholars describe the tension that often exists within partnerships due to the different institutional realities in which researchers and practitioners operate (Coburn et al., 2013; Conaway, Keesler, & Schwartz, 2015; Donovan, Wigdor, & Snow, 2003; López Turley & Stevens, 2015; Snow, 2015). Definitions of partnerships typically emphasize that they focus on persistent problems of practice within a mutualistic context of sustained interaction that benefits both researchers and practitioners (Coburn et al., 2013; Donovan et al., 2003; Snow, 2015). As any researcher knows, there is a large gap between identifying a topic for research and determining the specific questions to explore. For partnerships, we argue that once they have defined a problem of practice, there may be ways in which careful consideration of the needs of both researchers and practitioners can inform the selection of particular types of research questions that will be mutually beneficial to pursue.

We assert that two key factors shape the constraints and affordances of question types for partnerships: (a) *sphere of interest*: To whom is this particular question of interest? and (b) *sphere of action*: How could we act on what we learn from answering this particular question? While all research benefits from consideration of interest and action, because partnerships involve people inhabiting two distinct roles—whose spheres of interest and spheres of action are also distinct—considerations of interest and action take on particular importance within partnerships. Within the factor of interest, related questions include: How significant is the issue this question addresses? Who within the education agency wants to know the answer to this? Who within other education agencies wants to know the answer to this? Who within the research community wants to know the answer to this? Has a similar question been answered elsewhere? Within the factor of action, related questions include: Are we in a position to change *existing* policy/practice based on research findings? Could findings inform the agency's *future* policy/practice? Could findings inform the policy/practice decisions of other education agencies?

Some research questions are of high interest from a practitioner's perspective because they address a very significant issue that impacts key aspects of the agency's work. Researchers' interest in questions shares some features of practitioners' interest, with value placed on significant issues that are widely relevant. For example, a key criterion in evaluating applications for grants from the Institute of Education Sciences is the extent to which the application describes the significance of the research. However, researchers are also charged with making unique contributions to scholarship. Therefore, researchers may be more interested in questions that are novel and address a clear gap in existing knowledge.

When considering the factor of action, practitioners' and researchers' positions are even more distinct. Individual practitioners have power to make changes in particular types of

Table 1
Typology of Questions for Researcher-Practitioner Partnerships

Type	Frequency	Definition	Examples
Data quality	Total: 41/41 Explicit: 16/41 Implicit: 25/41	Data quality questions provide information about the availability, validity, and reliability of data, answering questions such as: What data do we have? Are these data accurate? and/or What additional data may we need that we do not currently have? Partnerships with explicit data quality questions explicitly include these questions as a focus of their work. For partnerships with implicit data quality questions, it can be inferred that they will need to address data quality questions to accomplish their goals, but the data quality questions are not an explicit focus.	Types of activities: Creating new data elements, new metrics, or new types of data collection; merging data from multiple agencies to create a new data set; investigating the validity and reliability of measures; using existing variables to create indicators; developing instruments Specific examples: Explicit data quality question: Merging data from the foster care system with statewide education data and establishing new metrics for how changes in foster care placement are related to changes in school stability Implicit data quality question: Supporting progress monitoring within prekindergarten programs but without explicit discussion of inventorying current data from progress monitoring and determining additional progress monitoring data that may be needed
Information gathering	Total: 41/41	Information gathering provides answers to descriptive and/or predictive questions such as: How many…? or What is the relationship between…?	Types of activities: Tabulating frequencies, determining predictors, understanding trajectories (using descriptive methods) Specific examples: Identifying the 3rd-, 5th-, and 8th-grade indicators that are most predictive of students' college readiness by the end of 11th grade; analyzing information about the range of early childhood education experiences among entering kindergarteners
Evaluation	Total: 9/41	Evaluation questions ask: What is the effect of this program or policy?	Types of activities: Conducting experiments (e.g., randomized controlled trials), conducting quasi-experimental analysis (e.g., regression discontinuity designs, propensity score matching), potentially including qualitative analysis as component Specific examples: Using quasi-experimental methods to compare outcomes for community college students who did and did not participate in accelerated basic skills courses, along with interviews of program directors; using difference-in-difference to estimate how performance pay and monitoring impacts where teachers want to teach
Design	Total: 26/41 Explicit: 4/41 Implicit: 22/41	Design questions ask: What new materials, activities, and/or systems would address this problem? Focus is on understanding a particular problem of practice while also collaboratively constructing a solution, perhaps by designing a new tool or process that accomplishes particular goals for learning and/or system change. Partnerships with explicit design questions explicitly describe using elements of design research, such as iterative cycles through which a tool, intervention, process, and/or product will be refined. Partnerships with implicit design questions describe designing materials, activities, and/or systems to address a problem of practice but do not explicitly describe the design process or incorporate iteration and continuous improvement.	Types of activities: Conducting a needs assessment; using plan-do-study-act cycles; iteratively refining new materials, activities, and/or systems to be used by practitioners Specific examples: Explicit design question: Using design research cycles to develop practical measures that teachers can use to assess and leverage improvement in middle school mathematics discussions Implicit design question: Designing professional development courses for adult education case managers by using information gathered about case managers' current practices and student outcomes but without explicit discussion of the design process

policies and practices but not others. In some cases, practitioners may want to understand more about a particular policy or practice but not actually have the power to change that policy or practice directly. In other cases, practitioners may want to answer a question about past policies or practices not because it can directly inform their own future decisions but because they wish for it to inform policy and practice decisions more broadly. Researchers' ability to act on findings in ways that influence policy and practice are typically of this more indirect type. They may publish articles or give presentations that inform national and local conversations about education issues, and they may create new curriculum or tools that are adopted in particular locations. When conducting research within partnerships, researchers' ongoing interactions with practitioners may create opportunities to act in ways that influence policymaking and the implementation of new policies and practices. However, impact from researchers' work still typically requires action from practitioners (e.g., to actually change a policy or adopt a curriculum). We take up these two factors, interest and action, within the context of the four types of research questions mentioned previously—data quality, information gathering, evaluation, and design. Ultimately, answers to these questions about spheres of interest and action impact the utility of pursuing particular questions within partnerships.

Methods and Data Sources

To better understand the types of research questions addressed by partnerships, we systematically reviewed the abstracts for the 33 researcher-practitioner partnerships funded by IES and the 8 researcher-practitioner partnerships funded by Spencer as of fall 2016. While these abstracts do not reflect the full picture of partnerships' day-to-day work, they nonetheless provide a useful snapshot of the ways in which partnerships describe their research questions at a particular point in time. The first author developed the initial codes for question types based on prior research, and the codes were collaboratively revised after reading the corpus for disconfirming evidence. The first and fourth authors separately coded the partnerships' research questions as data quality (distinguishing between explicit and implicit, as described more fully later), information gathering, evaluation, and/or design (again distinguishing between explicit and implicit, as described more fully later).[2] Intercoder reliability was initially 73%, with differences most frequently occurring when determining whether data quality questions and design questions were explicit or implicit. The codes were subsequently revised to further distinguish these question types, and initial differences were resolved via consensus.

To augment this analysis of partnerships' questions, we used our own partnership as a case study (Yin, 2009). We collaboratively identified questions of each type that we had pursued, choosing examples of each question type by consensus. Then, from our different perspectives as researchers and practitioners, we offered our reflections on ways in which these questions intersected with our spheres of interest and spheres of action, with the first author drafting an initial write-up and the other authors adding and modifying to more fully incorporate their perspectives.

To ground our discussion and provide context for this case study, we briefly describe the origins and structure of our partnership. Beginning in 2012, the Oregon Department of Education (ODE) and Oregon State University (OSU) began collaborating on a range of projects focused on English learners. Given the large and growing EL population (U.S. Department of Education, 2015) and the stark discrepancies in achievement between ELs and their peers (Fry, 2007), ODE was in the process of embarking on a variety of ambitious initiatives targeting ELs but recognized the need for additional research capacity to ensure success. After collaborating informally on several projects, ODE and OSU formalized our partnership, securing funding from the Institute of Education Sciences in 2014 and the Spencer Foundation in 2016. Monthly partnership meetings are a key structure for our work together, providing opportunities to review overarching questions, share updates on analysis, and discuss implications for policy and practice. Our work to date falls within the category of place-based research alliances (Coburn et al., 2013).

Question Types

Data Quality Questions

Features of addressing data quality questions within partnerships. Across all research, including all research within partnerships, data quality is a crucial consideration. Questions related to data quality may include: First, what data exist that may pertain to questions we would like to answer? Second, are these data accurate? Third, what additional data may we need that we do not currently have? Thus, pursuing data quality questions may involve inventorying data elements; creating new data elements, new metrics, or new data collections; merging data from multiple agencies; investigating the validity and reliability of measures; and/or developing instruments. Often, data quality questions are precursors to other questions that researchers, within and outside of partnerships, would like to address. For example, an IES-funded partnership between the state of Colorado and researchers at the University of Northern Colorado aims to improve educational outcomes for students in foster care. While their main questions focus on information gathering, a crucial first step is to merge educational records from the state department of education with foster care placement records from the state department of human services, creating new data elements to flag changes in foster care placement. Once these elements are created, then partnership members can engage in information gathering to understand the relationship between changes in foster care placement and educational outcomes.

We found that all 41 IES and Spencer partnerships had data quality questions. However, we noticed that some partnerships (16/41) explicitly raised data quality questions in their abstracts (as with the Colorado partnership described previously), while in other cases (25/41), data quality questions were implicit. For example, one Spencer-funded partnership planned to answer descriptive questions about the dramatic expansion of prekindergarten programs in New York City. In addition, the partnership aimed to support progress monitoring in pre-K programs. This undertaking seems to entail a variety of data quality questions, including

determining the types of progress monitoring already underway within pre-K programs (answering the question: What data do we have?) and any additional types of progress monitoring that might be needed (answering the question: What additional data do we need?). However, these data quality questions were not explicitly discussed in the partnership abstract.

While all researchers work to ensure data quality, a key affordance of taking up data quality questions within partnerships is the ongoing involvement of practitioners to ensure that researchers fully understand data elements and their limitations. Practitioners bring deep understanding of existing data. For example, when working with administrative data, researchers working outside a partnership may receive codebooks and have specific opportunities to ask practitioners questions about data elements, particularly at the beginning of a study. In contrast, within a partnership, the ongoing interactions and relationships among researchers and practitioners enable a sustained dialogue about data quality. This is particularly helpful in checking researchers' assumptions about the data they are analyzing and their interpretations of preliminary findings. In addition, when partnerships bring together multiple agencies (as with the Colorado partnership described previously) or multiple divisions within an agency (as in our own partnership), practitioners across these agencies and/or divisions have the opportunity to engage in ongoing dialogue with one another (not just with researchers), potentially developing a deeper understanding of the data each maintains and of ways to improve and leverage that information.

Turning to considerations of interest and action, data quality questions can be of high interest to both researchers and practitioners because they open the door to answering other types of questions. On the other hand, a constraint for data quality questions is that they may have a relatively narrow focus and be specific to the particular education agency's context. In this case, because the findings might be of limited interest to other education agencies and researchers, they may fall lower on the dimension of interest than other questions. However, as with the case of the Colorado partnership focused on youth in foster care, when data quality questions address novel issues, they may be of high interest to both researchers and practitioners within the partnership, as well as the broader communities of researchers and practitioners.

Within the dimension of action, an affordance of data quality questions is that practitioners may have the ability to act on findings related to data quality. For example, if a data element is determined to have validity or reliability concerns or if additional data are needed that had not been collected in the past, practitioners may have the authority to take a variety of steps, such as modifying the data collection in the future. For example, in a partnership between the Strategic Education Research Partnership and Baltimore City Public School System focused on increasing student perseverance and achievement at the middle school level, the partners plan to evaluate the validity and reliability of current measures of student perseverance, and potentially the district may "revise its own data collection and analysis of student perseverance measures."

A data quality question from our partnership. A key initial research question for us was: Where do particular instructional program models for ELs, specifically various types of bilingual programs, exist across Oregon? While this initially appears to be a descriptive, information gathering question, questions of one type often entail questions of another type, as noted earlier. In this case, the first step was to determine whether the state's existing data about instructional program models were valid. This data quality question was of high interest to practitioners because they wanted valid data about program models to guide their future work. In addition, the question was of interest to both researchers and practitioners because if the existing data were valid, that would open the door to asking a variety of other questions, such as information gathering questions about the relationship between instructional program models and student outcomes. Within the dimension of action, practitioners had high ability to act on findings about the validity of the instructional program model variable, either by continuing with current data collection practices if the data were valid or modifying data collection practices if they were not.

As part of Oregon's Title III data collection, districts report information about the instructional program models in which individual ELs are enrolled. When analyzing data to determine which schools had various types of bilingual programs, we uncovered data that seemed implausible. For example, one elementary school reported offering a two-way immersion program to one second grader and one fifth grader. Through triangulation of information from these variables with additional sources, we were able to develop lists of schools in which we could confirm the existence of bilingual programs. However, this exercise and ongoing conversations with practitioners at the district level revealed widespread confusion about the possible codes for EL program models. A work group including EL program staff from various regions of the state revised the program model definitions and codes, and their recommended changes have now been implemented, improving data quality going forward and allowing for the use of the program model variables in future analyses.

If this work had been done outside the context of a partnership, a researcher could have independently uncovered implausible patterns within the program model variable and determined that the variable should not be used for analysis. However, because this work occurred within the context of a partnership, we were able to determine reasons for the implausible patterns, with practitioners taking concrete action to improve data quality in the future. Researchers' ability to act on findings from this question was somewhat more limited in the short term since the lack of valid past data limited possible analyses. However, because defining instructional program models for ELs is a recurring issue for both research and practice (Boyle, August, Tabaku, Cole, & Simpson-Baird, 2015), the work to establish definitions in Oregon has the potential to contribute to conversations in other contexts.

Information Gathering Questions

Features of addressing information gathering questions within partnerships. Information gathering is central to the work of partnerships. All 41 partnerships funded by IES and Spencer describe at least one information gathering question. Information gathering typically involves using a variety of methods, such as surveys, interviews, and multivariate regression, to address the first

question in the NRC typology: What is happening? However, as noted earlier, questions of one type often entail questions of another type, and information gathering could occur as part of pursuing an evaluation or design question. For example, qualitative case studies could provide information to augment an evaluation of a program or policy, potentially addressing the third question in the NRC typology: Why or how is the effect happening?

Information gathering is likely so prevalent within partnerships because it serves as a necessary first step for developing a deep understanding of the broader problem of practice under investigation. Information gathering thus facilitates further work, such as effectively evaluating initiatives related to the problem or practice and/or crafting thoughtful solutions. Often partnerships' information gathering questions appear consistent with the "Exploration" category in IES's goal structure, focused on identifying malleable factors associated with student outcomes. Partnerships are committed to working together toward a lofty goal, such as improving student outcomes, but recognize that there need to be a variety of incremental steps toward this ultimate goal, with a crucial component being an analysis of the current reality through information gathering.

A key type of information gathering in which many partnerships have engaged is determining predictors of later outcomes, with the goal of using these analyses to develop early warning indicators. For example, the Los Angeles Educational Research Initiative and Baltimore Education Research Consortium have begun to analyze predictors of college enrollment (Durham et al., 2015; Phillips et al., 2015).

In some cases, information gathering involves simple tabulations, but more often, it involves newly created variables or data merged from multiple sources that were previously unavailable. For example, an IES-funded partnership between the University of Maryland and District of Columbia Public Schools is linking student assessment data with data from the district's online learning platform to explore correlations between students' use of the platform and academic achievement.

Because information gathering questions encompass such a wide range of topics and methodological approaches, it is challenging to generalize about the level of interest and action that these questions spark. As the previous examples illustrate, answers to information gathering questions can be of high interest to practitioners because they can illuminate patterns that were previously not visible within topics of crucial importance to the agency's work. To the extent that the questions are of interest to other education agencies and the broader research community as well—for example, by addressing questions not already extensively studied elsewhere or allowing for new research methodologies to be employed—they also have the potential to be of high interest to researchers within the partnership as well, potentially leading to publications. Again, because of the broad range of information gathering questions, the extent to which researchers and practitioners can act on findings from these questions seems highly variable. As noted previously, many agencies have drawn from findings about predictors of later outcomes to develop early warning indicator systems that administrators use to identify students in need of support (Phillips et al., 2015). However,

it may be more difficult to act on findings from other types of information gathering questions, such as when practitioners' ability to act is constrained by financial considerations or federal policies. For example, in the D.C. partnership exploring the relationship between blended learning and student outcomes, practitioners would have difficulty acting on findings if funding for blended learning was reduced or eliminated.

Example of an information gathering question from our partnership. A key information gathering question that we explored in the early stages of our partnership was: How long does it take English learners in Oregon to attain English proficiency and exit EL services (a process known as EL reclassification)? This question is of interest for a variety of reasons, including informing targets that states must set for the proportion of ELs who make progress toward achieving English proficiency each year. Because it had been addressed in a growing number of state and local contexts (e.g., Haas, Tran, Huan, & Yu, 2015; Slama, 2014; Thompson, 2017; Umanksy & Reardon, 2014), it was of somewhat less interest to researchers than other possible questions; however, because practitioners needed to know the answer in their particular context, this question was still of high interest to them. Using discrete-time survival analysis, we found that the median time necessary for students who entered Oregon schools as English learners in kindergarten to attain English proficiency and exit EL status was between five and six years. However, there was substantial variation in time to reclassification related to factors such as initial English proficiency level and special education participation.

Practitioners and researchers have used findings from this question to inform a variety of policy conversations within the state and beyond. For example, recent state legislation required the state to adopt a Long-Term English Learner (LTEL) definition (OR-HB3499). Analysis we conducted showed that after seven years, less than half of students who entered Oregon schools scoring at the beginning English proficiency level in kindergarten had been reclassified. Stakeholders drew on this analysis to advocate that the state should not consider a student to be an LTEL until they have been enrolled in Oregon schools for at least seven years. Because of the large body of existing literature on time to reclassification, we have not attempted to publish these findings. However, partnership researchers drew on these findings when writing comments on provisions related to EL reclassification in draft regulations for the Every Student Succeeds Act (ESSA).

Evaluation Questions

Features of addressing evaluation questions within partnerships. The third type of research question that partnerships might explore is evaluation, answering questions such as: What is the effect of this policy or program? Many analyses for evaluation questions employ quasi-experimental or experimental methods, though many involve qualitative methods as well. Evaluation questions were the least common question type among IES- and Spencer-funded partnerships, with 9 out of 41 partnerships including evaluation questions. Some partnerships focus on using existing

administrative data to evaluate the effectiveness of a program or policy. For example, in one IES-funded partnership, researchers from RAND and Texas A&M are collaborating with the Texas Higher Education Coordinating Board to evaluate efforts to improve developmental education in two- and four-year post-secondary institutions in the state, using quasi-experimental methods.

In other cases, partnerships use experimental methods to evaluate an intervention that may have been designed by researchers or co-designed by researchers and practitioners. For example, the vocabulary intervention Word Generation was developed within the context of the Strategic Education Research Partnership (SERP) in Boston and then evaluated via experiments within a wider set of districts connected to SERP (Lawrence, Crosson, Pavé-Blagoev, & Snow, 2015). In this case, the evaluation used new data collected specifically to analyze relatively short-term (same-year) outcomes of a recently implemented program.

The long-term, collaborative nature of partnerships creates a variety of affordances for pursuing evaluation questions. First, ongoing interactions between researchers and practitioners ensure that practitioners have continued input into how the evaluation unfolds, with information gathering helping to shape evaluation design in all partnerships reviewed here. In addition, the ongoing, collaborative nature of partnerships, with multiple opportunities for discussion of findings in progress, ensures that practitioners understand the nuances of evaluation findings more deeply than if they simply receive a report at the conclusion of a study. By understanding the findings more deeply, practitioners are then more invested in acting on and disseminating the findings.

Evaluation questions are often of high interest to practitioners, in part because their answers can directly inform decisions about resource allocation. From a research perspective, evaluation questions may be of high interest as well, in part because the methodology used to answer these questions, including quasi-experimental or experimental methods, often has high prestige within the academy. Researchers may have clear paths to publication for findings emerging from these causal questions if the questions are clearly of relevance outside the context of the partnership. In addition, proposals for experimental or quasi-experimental studies may appeal to federal and foundation funding sources. The extent to which practitioners can act based on findings from evaluation questions is variable, however, depending on whether the policy or practice evaluated is something over which practitioners exercise direct or indirect control. Some evaluations may involve policies dictated by federal or state legislation, over which practitioners have little direct control. In other cases, such as the evaluation of Word Generation, practitioners and researchers have the ability to immediately act on research findings to modify the curriculum and its implementation.

Example of an evaluation question from our partnership. In our own work, one evaluation question we have explored is: What are the effects of English learner reclassification on student outcomes, and what is the variation in these effects across districts? Our aim was to evaluate the reclassification policies operating in the state as well as the services provided to students before and after reclassification. This question is of high interest to both researchers and practitioners because it addresses an issue with significance both locally and nationally and fills a gap in the research literature. However, as discussed in more detail in the following, practitioners had limited ability to act on research findings.

For this analysis, we used a multisite regression discontinuity design. First, in each district, we estimated the effect of attaining the state's test-based reclassification criteria on actually being reclassified. Then we used this as an instrument to estimate the effect of reclassification on later outcomes in each district. Finally, we used meta-analysis to determine the average statewide reclassification effect as well as variation in this effect across districts (Cimpian, Thompson, & Makowski, 2017). We found wide variation among districts in the extent to which attaining the state's test-based reclassification criteria actually led to reclassification. We also found wide variation in the effect of reclassification on later outcomes.

This study was the first to examine variation in reclassification effects across districts within the same state. Because prior literature using quasi-experimental methods had tended to find negative or null effects of reclassification on later outcomes (Robinson, 2011; Robinson-Cimpian & Thompson, 2016; Umansky, 2016), these findings made a contribution to the research literature by demonstrating that reclassification effects can vary substantially, even among districts within the same state. In addition, this study was valuable in employing new advances in multisite regression discontinuity designs.

However, practitioners' ability to act on research findings was limited for a variety of reasons. First, reclassification policy in the state was undergoing a major overhaul due to external factors, including a shift to a new English language proficiency assessment and the implementation of ESSA. Other features of our study also limited the extent to which it provided directly actionable information to practitioners. First, to examine long-term outcomes, we use data that span many years. When we consider reclassification effects on graduation, for example, we analyze data from cohorts of students who were in ninth grade as early as 2006–2007. In the interim between when these students were in high school and today, many districts have made substantial changes in their services for ELs. Second, rigorous quasi-experimental methods such as those we employed have limitations regarding the population for whom effects can be estimated. For example, we cannot estimate reclassification effects in districts with very small numbers of ELs or effects in districts where attaining the state criteria has a weak relationship to actually being reclassified. From the state's perspective, it is useful to know that reclassification effects varied across districts in the past. However, this knowledge provides only limited guidance in crafting new reclassification policies, particularly since ESSA requires substantial changes in this area.

Design Questions

Features of addressing design questions within partnerships. The previous three question types—data quality, information

gathering, and evaluation—typically focus on understanding past or current reality within education agencies. In contrast, the final question type—design questions—is future oriented. Researcher-practitioner partnerships focused on design questions work to understand a particular problem of practice while also constructing a solution (Edelson, 2002), perhaps by designing new materials, activities, or processes that accomplish particular goals for learning and/or system change.

In our analysis of research questions across partnerships, we found that many partnerships (26/41) described a goal of using research findings to design something, such as professional development or new accountability metrics. However, in only 4 of these 26 cases did partnerships explicitly describe elements of the design process, illuminating how research findings would be used to inform the design of materials, activities, or systems. These four partnerships explicitly described ways in which they would use elements of design research, such as iterative cycles of continuous improvement. We categorized these partnerships as having explicit design research questions. For example, researchers from Vanderbilt and the University of Washington have long been collaborating with a school district to improve middle school math learning (Rosenquist, Henrick, & Smith, 2015). In their Spencer-funded work, they now are using design research cycles to develop practical measures that teachers can use to assess discussions in math classrooms.

Twenty-two other partnerships seemed to have implicit design research questions, with a goal of designing something but without explicit discussion of the design process. For example, an IES-funded partnership between AIR, the New York State Department of Education, and the Literacy Assistance Center aimed to improve adult education case managers' use of data to make decisions, using the results of information gathering to design professional development materials for case managers. The fact that the partnership's abstract did not discuss the design process could simply be due to limited space. However, the fact that more than half of partnerships described designing something without describing the design process indicates a potential area of need, as we discuss in more detail later.

Design questions have the potential to be of high interest to both practitioners and researchers, facilitating innovation within key areas and producing potentially novel solutions to problems. In addition, design questions require that partnerships members have the ability to act on the basis of research findings, often implementing and refining particular approaches, tools, or processes in iterative cycles. However, as Peurach (2016) describes, education's impact infrastructure—for evaluating the effects of programs—is substantially more robust than its improvement infrastructure—for designing and refining innovations. Therefore, researchers and practitioners may have limited experience and training in continuous improvement processes and other elements of design research.

Example of a design question from our partnership. Our own work has uncovered design questions that we are now exploring. In analyzing the time necessary for ELs to be reclassified as English proficient, we were struck by the low likelihood of reclassification

for English learner students with disabilities (ELSWDs). We conducted a variety of analyses to answer information gathering questions, such as: How does likelihood of identification for special education compare for students ever classified as English learners and students never classified as English learners, and how does this vary by disability type (Umansky, Thompson, & Díaz, in press)? We also began conducting interviews with district and school staff to understand their experiences with ELSWDs, particularly how their district has approached reclassification for these students. We are now in the process of launching a design research project, partnering with several districts to more fully understand how to determine when an English learner with a disability has attained English proficiency and should no longer receive EL services. As part of this work, we anticipate piloting new tools and/or processes for reclassifying ELSWDs and engaging in cycles of inquiry to refine these tools.

The Hybrid and Iterative Nature of Partnership Research

In our own work, we have experienced the ways in which data quality, information gathering, evaluation, and design are interconnected, and we naturally circle from one question type to another. For example, our information gathering about the time necessary for English learners to be reclassified led to more information gathering about special education identification among English learners, which has now led to a design research question about how to determine when EL students with disabilities have attained English proficiency and should be reclassified. Given the long-term nature of researcher-practitioner partnerships, a key benefit of work within partnerships is this ability to quickly move from one type of research question to another, building a cumulative knowledge base and relationships that shape future work together. As others have pointed out, given the high turnover, political tensions, and shifting priorities typical within education agencies, partnerships can provide continuity and sustained focus on a topic (e.g., Snow, 2015).

The hybrid and iterative nature of research within partnerships has several implications for partnership development and funding. First, because we cannot completely predict the course of our joint research far in advance, we have found it important to involve researchers and practitioners with a range of expertise, both in research methodologies and content areas, and expand our team in response to evolving needs. For example, as our research has become more focused on English learner students with disabilities, we have incorporated agency staff who oversee special education at the state level into our monthly meetings. Second, the need for partnerships to evolve in response to emerging concerns from practitioners and in response to sudden shifts in the policy landscape suggests a need for funders to anticipate this and allow for reexamination of priorities and activities over time.

Conclusion

For partnerships to succeed in the long term, they must find ways of working that meet the needs of both researchers and practitioners. Our examination of research questions addressed

by partnerships highlights several patterns. First, data quality is a concern among all partnerships, but in some cases this concern is explicit, and in other cases it is implicit. Our own partnership has shown us the value of making data quality questions an explicit focus of our work. For example, improvements to the data collected about the program models in which ELs are enrolled will facilitate research and technical assistance going forward. Data quality questions typically are not a focus of research proposals (except for specific measurement studies). However, because practitioners are often well positioned to act on findings from data quality questions and because improvements in data quality, such as merging data held by different agencies, have substantial long-term benefits to both research and practice, there may be value in encouraging partnerships to explicitly attend to these questions. Second, information gathering is a focus of all partnerships. However, although most partnerships want to use the information they gather to design something, few partnerships seem to have an explicit vision of how they will move from information gathering to design. This suggests that partnerships may benefit from involving colleagues with experience in design research. Finally, evaluation questions are a less common focus of partnerships, and perhaps funders could consider ways to support partnerships in moving from information gathering to evaluation.

In addition, we see a need to further reshape incentive structures for researchers, which would in turn reshape the constraints and affordances of taking up particular question types. Others have argued that relevance to practice should serve as a key criterion for defining what constitutes rigorous research (Gutiérrez & Penuel, 2014), and as noted earlier, funders typically require research proposals to address significance to practice. However, further action could be taken by universities to encourage researchers to truly engage in mutualistic, long-term collaborations with practitioners. For example, many universities expect faculty to publish and present with graduate students. Following this model, faculty could also be expected to publish and present with practitioners, indicating practitioner collaborators within their CVs, just as they do with graduate students. Furthermore, during the tenure review process, in addition to seeking input from students, committees could also seek input from practitioners with whom faculty have collaborated. By more formally rewarding faculty for true collaboration with practitioners, faculty's spheres of interest could potentially widen to overlap more extensively with practitioners' spheres of interest.

As partnerships select research questions to pursue (within the problem of practice they have already identified), we suggest that it may be useful to consider: (a) *sphere of interest*: To whom is this question interesting? and (b) *sphere of action*: How could we act on what we learn from answering this particular question? When partnerships are establishing their research agendas, either at the outset of the partnership or as the partnership evolves over time, members of the partnership could explicitly reflect on these two dimensions. For example, during an agenda-setting meeting, partnership members could first list out potential research questions to pursue, potentially categorizing the questions as data quality, information gathering, evaluation, and design. Then, for each potential research question, partnership members could collectively answer the questions about interest and action listed previously. Finally, members could reflect on which research questions seemed to be of high interest and also highly actionable for both the researchers and the practitioners. This process could also reveal gaps in the partnership's membership. For example, if researchers and practitioners both found a question of high interest but no current member of the partnership had the ability to directly act on answers to the question, practitioners could potentially brainstorm whether additional colleagues could be brought into the partnership whose spheres of action would enable them to directly act on research findings. Explicitly considering the extent to which possible questions are of high interest and are actionable for both researchers and practitioners may increase the likelihood that the needs of both parties will be met and that partnerships can truly serve as a tool for meaningful improvement in education.

NOTES

[1]For information about the Institute of Education Sciences researcher-practitioner partnership grant program, see: https://ies.ed.gov/ncer/projects/program.asp?ProgID=81. For information about the Spencer research-practice partnership program, see: http://www.spencer.org/research-practice-partnership-program-statement.

[2]These abstracts are publicly available at: http://ies.ed.gov/funding/grantsearch and http://www.spencer.org/research-practice-partnership-past-grantees.

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