Needs Assessment for IERI Scale-Up Research Projects

States with institutions that have received an IERI grant
(interventions may be conducted in other states)
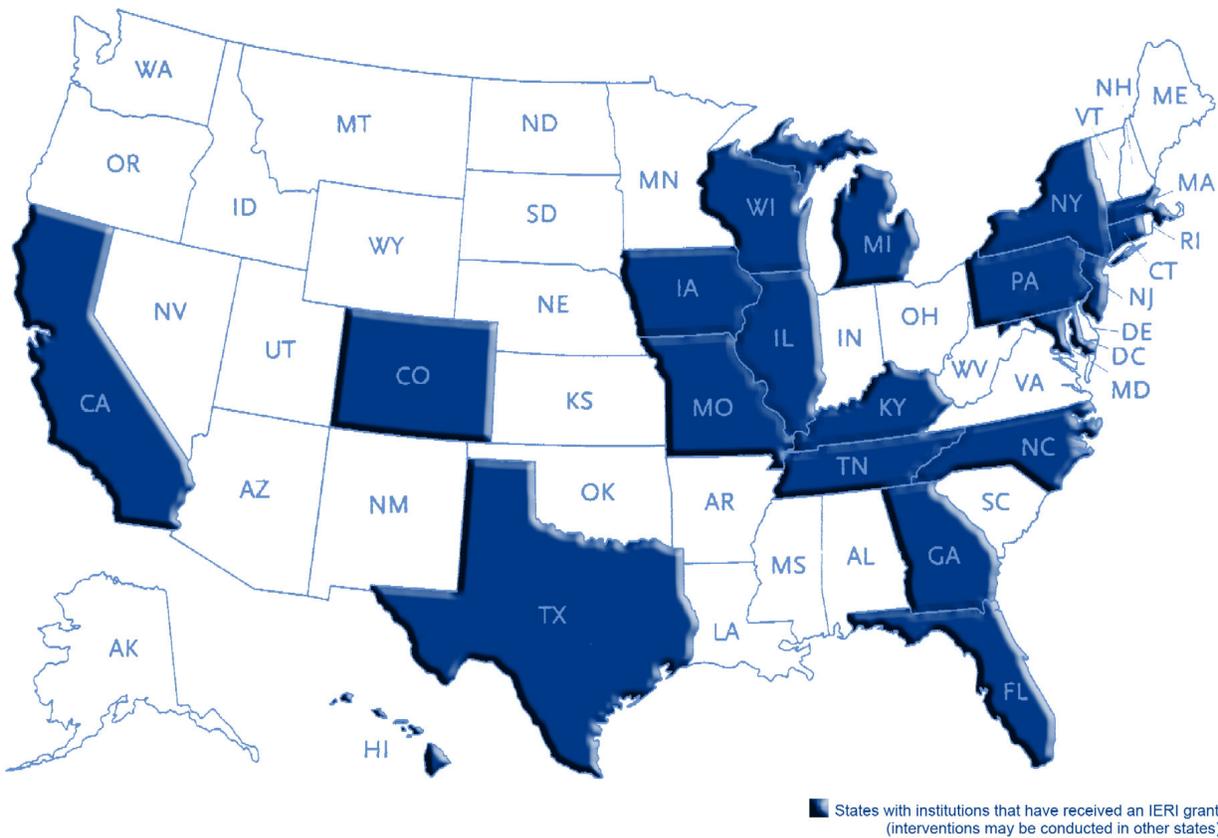
Summary Report of Findings, Years 1-3

Prepared

by

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Introduction

The Data Research and Development Center (DRDC) was established as a research and technical center to support investigators conducting research funded by the Interagency Education Research Initiative (IERI), a collaboration of the National Science Foundation (NSF), the U.S. Department of Education, and the National Institute of Child Health and Human Development (NICHD). As a technical center, DRDC works to identify and address administrative and methodological challenges faced by investigators conducting research on scale-up. In addition, DRDC is responsible for building research capacity by helping to establish a community of scholars concerned with designing, measuring, and implementing interventions that have the potential to be successfully brought to scale.

As part of DRDC's cooperative agreement with IERI, the Center was asked to conduct a needs assessment to identify the technical assistance requirements of the IERI community and to guide outreach efforts. In response to this request, the DRDC conducted a survey of IERI investigators to determine the technical assistance needs of each project. To learn more about investigators' research objectives, questions were posed in four areas: (1) conceptions of scale-up; (2) technical assistance; (3) data sharing and data archiving; and (4) confidentiality. Between December 2002 and December 2004, sixty-nine principal investigators of active IERI projects were contacted to participate in the needs assessment; to date, 52 investigators have been interviewed. Analyses of the interviews indicate that the overwhelming majority of investigators are interested in some form of technical assistance and welcome opportunities for professional development. As a result of these interviews, researchers from nineteen projects requested and received a series of technical consultations.

Providing technical assistance tailored to meet the particular needs of IERI project investigators is an integral component of DRDC operations. Results from the needs assessment provided valuable information about the kinds of technical assistance that would be most helpful and the methods of delivery that would be most effective. These findings are directing DRDC's efforts to build capacity, to facilitate communication within the IERI community, and to scale up demonstrably effective educational interventions.

Defining a Needs Assessment

Needs assessment is a "systemic exploration of the way things are and the way they should be" (Rouda and Kusy, 1995)[1] and is often conceived as an important precursor to programs of action designed to correct the disparity between the observed and ideal states of a given project (see Soriano, 1995; Witkins and Altschuld, 1995; Gupta, 1999).

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[1] Needs assessment has also been defined as a "systemic effort to determine the nature of problems, challenges, and opportunities in a specific area" (Darryl L. Sink & Associates, Inc., 2003) and as "a systemic set of procedures undertaken for the purposes of setting priorities and making decisions about a program or organizational improvement and allocation of resources" (Witkin and Altschuld, 1995, p. 4).

A hallmark of needs assessment is the expectation that action will follow the identification of disparities between the actual and the ideal. Needs assessments may be conducted on behalf of individual organizations or, as in this case, be designed to recommend courses of action for addressing the identified needs of both individual projects and the research program as a whole (i.e., the IERI project portfolio).

Needs assessment is frequently referred to as "gap analysis" rather than "gap identification" because its aim is to learn more about particular needs (notably, the reasons they exist) with a view to closing the gaps. Care must be taken to distinguish situations in which action is required to close gaps from situations in which the goal is to excel—e.g., to set new standards for what "could" be. In the absence of a gap, or in situations where actual states exceed expectations, no such "need" exists. In such situations, however, a needs assessment can help to identify project strengths and accomplishments.

Individuals may be reluctant to identify gaps that would point to actual "needs" for technical assistance (which could be interpreted as self-reports of personal or project inadequacies). Respondents may be more likely to cooperate if the needs assessment emphasizes services that might be useful to the organization rather than organizational shortcomings. Such a model focuses less on determining where the "gap" lies between observed and ideal outcomes, and more on organizational development, emphasizing the role of needs analysis as feedback. Needs analysis conducted under this model is constructed and positioned as the exchange of ideas between a group that provides a service and those who could benefit from it. The "ideal" benchmarks are portrayed not as performance criteria, but as "the desires of the target population" (McKillip, 1987). This model was used in the DRDC needs assessment.

The ultimate objectives of this needs assessment were to identify the range of expectations researchers hold regarding the levels of excellence they aspire to achieve; to explore common themes and goals for improving the quality of educational research on scale-up; and to collaborate with investigators to enhance capacity in the field as a whole. This report describes the study we designed to collect information from individuals about their projects and about the field of scale-up more generally. The report has four major sections: (1) the design of the needs assessment; (2) analysis of the activities that investigators would like to see pursued; (3) the types of assistance provided by DRDC to date; and (4) plans for the future.

Designing the DRDC Needs Assessment

The needs assessment was developed by DRDC in consultation with IERI program staff. After a series of discussions, it was determined that the most effective method for conducting the needs assessment would be through a series of in-depth interviews with IERI Principal Investigators (PIs) with active projects. The needs assessment interview

protocol was developed over the course of three months.[2] An early version of the protocol was distributed to IERI program staff for review. Their comments were incorporated in a revised version that was pilot tested with six IERI PIs at the November 2002 annual IERI PI meeting in Alexandria, Virginia. A final version of the protocol was constructed after further revision. A copy of this final version of the protocol can be found in Appendix B.

The needs assessment protocol was structured around three major themes: conceptions of scale-up; technical assistance; and dissemination of results. To gain additional information on investigators' projects, interviewers asked respondents about the design of their projects. Following a discussion of their projects, investigators were asked how they defined scale-up within the context of their work. The majority of the interview focused on technical assistance needs, including design, instrumentation, qualitative and quantitative analyses, and data security, archiving, and sharing (see Table 1).

Table 1. Types of Technical Assistance Explored in the Interview Protocol

1. Design
   1.1 Study design
   1.2 Sample design
   1.3 Experimental or quasi-experimental design
   1.4 Longitudinal study design
2. Instrumentation
   2.1 Scale construction or item response theory
   2.2 Finding instruments to measure outcomes
   2.3 Finding instruments to measure implementation
3. Qualitative research methods
   3.1 Collecting behavioral observation data
   3.2 Other qualitative methods
4. Analysis
   4.1 Statistical analysis of small samples
   4.2 Multilevel statistical methods
   4.3 Statistical methods for longitudinal studies
   4.4 Analyzing behavioral observation data
   4.5 Data mining and/or exploratory data analysis
   4.6 Geographical information systems (GIS) models and/or spatial statistical analysis
5. Data security, archiving, sharing
   5.1 Data security
   5.2 Data archiving
   5.3 Constructing linkable data sets
   5.4 Public use data sets
   5.5 Privacy and confidentiality concerns

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[2] Institutional Review Board approval was requested and received. Signed informed consent forms were obtained before conducting the interviews (see Appendix A for a copy of the consent form).

DRDC previously reported on IERI projects that were active between December 2002 and June 2003, which for the purposes of this analysis will be referred to as "Period 1." During this period, DRDC wrote to 54 PIs, representing 57 IERI projects that were then active, to describe the plans for conducting a needs assessment and to request copies of their proposals and any other project documentation they wanted to share in preparation for the interview. Twenty additional projects were funded between July 2003 and December 2004 (the end of IERI's funding cycle for the year), which will be referred to as "Period 2" in this updated report. Prior to launching the assessments for both periods, DRDC staff read proposals and background information about each project and its investigators. These activities were undertaken to familiarize the interviewers with the projects and to make the assessments more customized to individual projects.

Figure 1--Type of Project
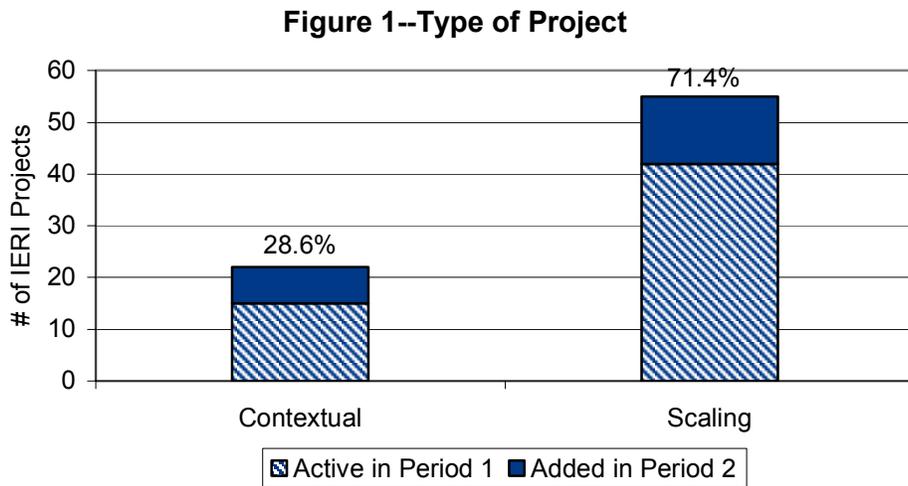
As shown in Figure 1, 71 percent of the 77 projects that were active in either Period 1 or Period 2 are Scaling endeavors (formerly described as "Phase 2" projects) and 29 percent are Contextual projects (formerly described as either "Planning" or "Phase 1" projects).   Consistent with IERI's request for proposals, which emphasized bringing promising educational interventions to scale, most current projects are Scaling projects; these projects are actively involved in scaling up specific interventions—by introducing them in multiple sites, with different populations of students, or at different levels of the educational system.   Because Scaling projects are typically broader in scope than Contextual projects, often involving multiple settings and/or longitudinal designs, these projects are funded for longer periods of time and at higher levels.
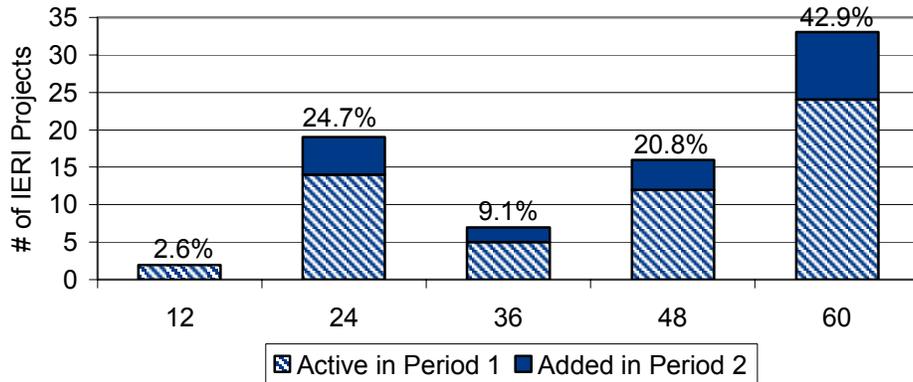
Figure 2--Length of Funding (months)

Figure 2 (above) shows that 43 percent of projects in Period 1 and Period 2 are funded for at least 5 years, while Figure 3 (below) shows that 29 percent of projects in both periods received funding of $5 million or more (though the trend seems to be towards smaller awards in Period 2).
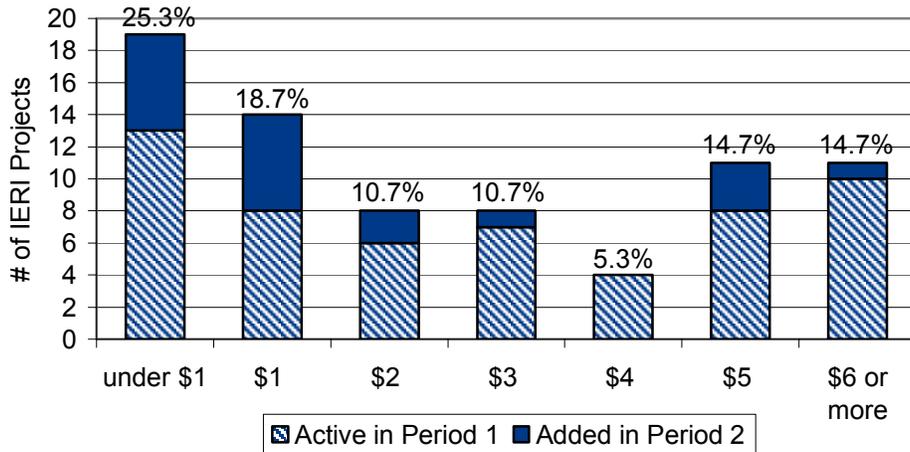
Figure 3--Amount of Funding (millions)

Figure 4 summarizes the school contexts, both administrative and academic, in which the projects are being carried out. Overall, 79 percent of the IERI projects focus on elementary school students. Few of the projects include students at multiple levels of the educational system. With respect to subject-area content, projects focusing on reading are the most prevalent (48%); 39 percent and 30 percent address issues in science and mathematics, respectively. In general, the subject-area focus of the projects remains the same in Period 1 and Period 2 and matches the areas emphasized in the IERI request for proposals (specifically, reading, mathematics, and science). Because so many of these projects focus on reading in the elementary grades, more attention may need to be paid to high school students and subjects, particularly high school mathematics and science.

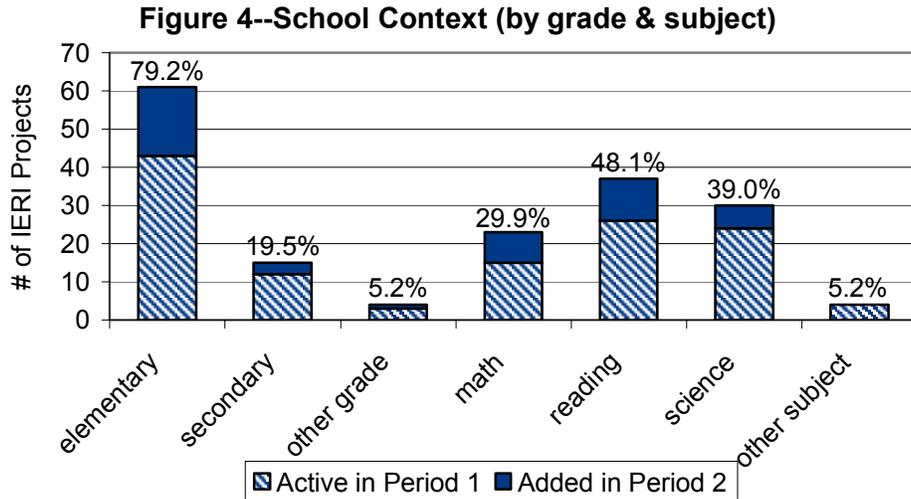**Figure 4--School Context (by grade & subject)**

Figure 5 presents a breakdown of principal investigators by institutional and departmental affiliation. Although the majority of PIs (53%) are associated with university education departments, a wide variety of other academic disciplines are represented. In addition to sociology and psychology, several of the investigators on these projects are from disciplines in fields such as computer science, the physical or biological sciences, electrical engineering, and human development. Note that "Research" includes non-governmental organizations with a major focus on research and development (R&D).

Figure 5--Institutional Affiliation
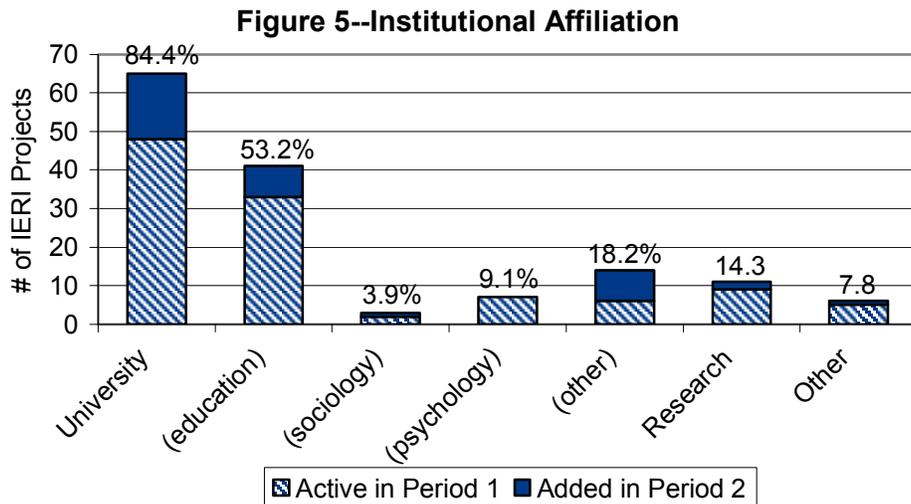
Between January 2003 and December 2004, DRDC contacted the principal investigators of each of the active IERI projects to schedule interviews. To date, 52 PIs and 13 co-PIs from 55 projects have been interviewed. Interviews are being scheduled with PIs on the remaining 22 projects unless the PI has not responded (6), has declined

to participate (2), or if the project has concluded (7). The majority of interviews for current projects have been completed and this report summarizes the responses from these interviews.

Analyzing the Needs Assessment

Information from the needs assessment interviews was analyzed in a number of ways, reflecting the themes explored in the interviews. With respect to conceptions of scale-up, a content analysis of transcribed interviews was conducted. For aspects of technical assistance, categories of specific types of assistance, as described in Table 1, were created. To ascertain researchers' preferred methods of technical assistance delivery, categories were created by summarizing responses to the corresponding items in the needs assessment interviews. It should be noted again that these findings represent a "snap shot" of IERI projects that were active from December 2002 through June 2003 (Period 1) and were added between July 2003 and December 2004 (Period 2). As additional projects are funded, DRDC will continue to build on current findings.

Results

Figure 6 presents a breakdown of projects for which needs assessment interviews have been conducted by period.

Figure 6--Active vs. Interviewed Projects, by Period
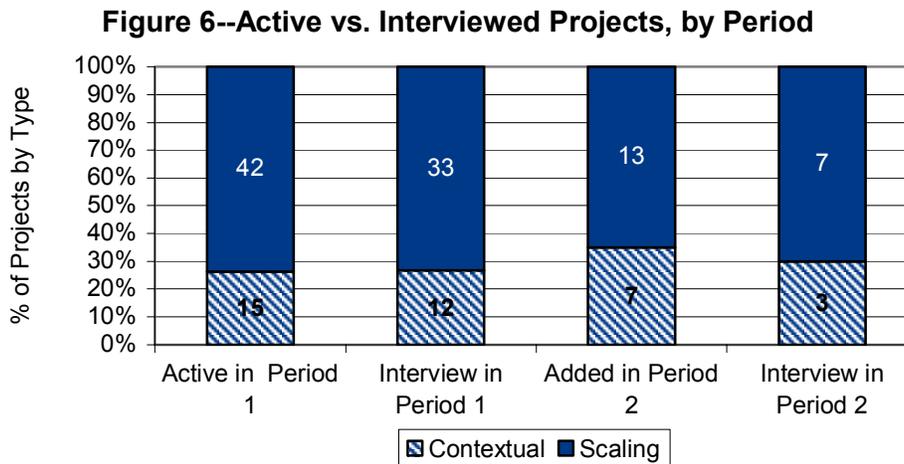
In general, the characteristics of these projects are quite similar to the population of IERI projects in both Period 1 and Period 2. Overall, seventy-three percent of respondents represent Scaling projects and 27 percent represent Contextual projects. Projects interviewed also reflect the general population of projects active since December 2002, with 44 percent being funded for 5 years or longer and 32 percent receiving at least $5 million. This similarity extends to school context as well, with 73 percent of projects directed toward elementary students, 47 percent focusing on

reading, 45 percent on science, and 27 percent on math (compare with Figure 4). As before, while the majority of principal investigators from these projects are associated with university departments of education, several other disciplines are represented.

Conceptions of Scale-up

Researchers in fields outside of education have also been tackling issues of scale-up. Some have developed informal and formal theories of scale-up that apply to their particular fields. However, literature from different disciplines frequently addresses issues of scale-up in different ways (see, e.g., Blumenfield et al., 2000; Brooks, 1975; Datnow et al., 1998; Flamholtz, 1990; Hopp and Spearman, 2001; Nunnery, 1998; Schafer, 2001; Smith et al., 1998, Taylor et al., 1999; Uvin and Miller, 1996; Uvin et al., 2000; Watts and Kumaranayake, 1999; Zlokarnik, 2002). Thus it was expected that IERI investigators would have different understandings—reflective of the different disciplines in which they were trained—of what it means to take a project to scale. Several questions were asked to identify the similarities and differences in researchers' conceptualizations of scale-up.

While all those who were interviewed spoke about scale-up in terms of 'size' and obtaining greater impact from exemplary interventions, they articulated several different conceptualizations of scale-up. One investigator in Period 1, for example, talked about the difference between doing "more of the same with the same" and "more of the same with others" as the difference between scaling-up and scaling-out. Most noticeably, investigators spoke about scale-up as more than the uncritical diffusion of innovation to ever larger (and more diverse) student and teacher populations. An investigator interviewed in Period 2 commented that "scale up really means matching what you have to offer with what the minimal conditions are that institutions have to have in terms of faculty, staff, funding, management, and leadership."

Investigators identified different approaches to extending the reach of exemplary interventions, suggesting that an important dimension of scale-up is the extent to which it employs external change processes to disseminate interventions requiring fidelity of implementation or interpersonal change processes requiring adaptation to particular educational contexts. The consensus view is that scale-up efforts involve an element of "scaling-up by drilling down"—encouraging careful attention to the fit between interventions and instructional contexts. Such efforts need simultaneously to support fidelity to principles and appropriately judged flexibility—and thus variation—in the ways in which these are enacted. As one investigator put it, scale-up means taking "into account how an educational initiative can interact with local conditions to maximize the possibility of positive and sustained programmatic impact."

The important conclusion for this report is that IERI researchers' conceptions of scale-up have a strong impact on the activities they believe will help build capacity to conduct this type of educational research. Specifically, their conceptions:

- Affect the types of *technical assistance* investigators are requesting in the needs assessment interviews;
- Affect the magnitude and nature of investigators' interest in *community building*, including *resource sharing*;
- Foster interest in making the IERI community a permeable one—e.g., through speaking with administrators about the importance and challenges of conducting scientific research on scale-up in schools;
- Identify a commitment to establishing when interventions have the scientific claims and warrants to merit implementation outside the (more or less controlled) pilot program environment; and
- Emphasize how scale-up research can bridge the gap between exemplary scientific inquiry and effective educational practice.

Perceptions of Technical Assistance

PIs in general agreed that they or other team members would like—or would have liked—assistance with essentially all of the types of technical assistance included in the protocol. However, in most instances, PIs indicated that they had individuals with the necessary expertise on their team or had received assistance from colleagues or outside consultants (including program officers at NSF). These responses may be due in part to the large number of projects that were at least midway through the term of their grants at the time of the interview or are continuations of previously funded Contextual projects. For the most part, investigators for these projects have already addressed many of the issues covered in the interview, particularly study and sample design.

It is important to note that the project investigators and their colleagues are accomplished researchers. Some of the most prominent researchers indicated they were open to seeking and receiving assistance. For example, one PI who is involved in a comprehensive scale-up project reported that although "we have great competence [on our team] we can always use another brain and resources at the table . . . and we'll take all the help we can get to the extent that you can provide it." However, a few researchers indicated that they might be reluctant to ask for technical assistance since, as one investigator observed, it could be assumed that "asking for help means you are ignorant." As another investigator commented, "people are typically reluctant to talk about their problems for fear that it will militate against them, particularly towards the end of the project." However, another PI thought that it was important "to be able to go to someone [for advice] who knows the system and knows what some of the expected requirements are."

With regard to the "when" of providing technical assistance, particularly in areas of study design (e.g., determining sample design and size and conducting randomized trials), most investigators reported that assistance would be most beneficial in the grant writing process or in the early stages of their project. As one investigator noted, assistance in the planning or early stages of implementing an intervention is particularly important to

researchers who are beginning to investigate scaling up their projects since "it's very hard in the rush to get your program implemented and to get all the measures that you're going to use [and then] to also start changing and adding variables and organizing the study differently . . . [because] there are some really important factors that you're failing to look at because you weren't aware of the factors related to scale-up." Several investigators also indicated that assistance should be provided in a timely fashion and readily available when a researcher "hits the wall." Other researchers commented that they would appreciate having technical assistance available throughout the length of their projects, particularly if they are to provide "shareable" data sets.

Issues Related to Scale-Up

A number of investigators expressed a desire for information on different types of scale-up, the kinds of challenges that may be encountered in scaling up an intervention, examples of successful implementations of scale-up, and guidance in the methods they might employ to scale up their own interventions. One investigator, for instance, suggested that technical assistance could be provided by "simply [making] researchers more aware of the literature that's out there . . . [and] actually exposing people to that relevant literature," especially if the literature has been synthesized to enable claims "like 'here are things that we pretty reliably know to be true about trying to scale something'." Another investigator also noted the paucity of the literature on scale-up and thought "it would be really interesting" if the IERI community "could actually make this more of a focus."

DRDC focused on this need by hosting a conference called *Conceptualizing Scale-Up: Multidisciplinary Perspectives* in November 2003. The program was designed to balance exploration of scale-up in disciplines outside education with reports on lessons learned from extant IERI research regarding the methodological, practical, and analytical challenges of conducting scientific research on educational interventions in varied school settings with diverse student populations. Papers presented at this conference have been collected into two edited volumes, titled *Scale-Up in Principle* and *Scale-Up in Practice*, while the papers themselves are available online to conference participants and, at the authors' discretion, to others.

Delivery of Technical Assistance

Many PIs offered ideas for ways to provide technical assistance. Several suggested conducting workshops or small group thematic seminars on different topics (a west coast PI suggested holding sessions in different regions of the country rather than nationally to better meet region-specific needs). It was noted that these workshops should be "high level" and not introductory and that the sessions should focus on "concrete problems other researchers encountered and how they dealt with them." One PI, however, indicated that workshops would be "minimally useful" since they are "conceptual rather than practical," and argued that "money would be better spent [by providing] emergency consultations."

Other PIs expressed interest in having face-to-face meetings with technical assistance personnel. One investigator, for example, indicated that he would like to see "teams of postdocs" with expertise in different areas of methodology traveling to project research labs. Almost all PIs said that they wanted to have more opportunities to interact with other researchers; more than half of the PIs specified that they would like access to "experts". A number of PIs indicated that they would want feedback only from highly qualified individuals. One PI specified wanting to have access to "a pool of knowledgeable consultants" in different facets of technical assistance. Another PI suggested forming an advisory board whose members would receive recognition (and a stipend) for their efforts. In short, whether delivered by one-on-one consultations or through specialized workshops or conferences, PIs want to be able to discuss issues with highly trained individuals with strong methodological backgrounds.

Problems and Needs

Tabulations of responses regarding different types of technical assistance show that most investigators who were interviewed (44 out of 52) would like access to such assistance (see Figure 7). In Period 1, investigators indicated that study design (46%) and sample design (34%) were areas where they could use some assistance. However, these numbers fell by more than half in Period 2, perhaps indicating a growing familiarity with and preparation for the methodological issues related to scale-up research in general and experimental study designs in particular. Investigators in Period 2 instead seemed more interested in assistance with the nuts and bolts issues of measurement and data analysis. Investigators in both periods remained quite interested in help building relationships with educators and/or other researchers.

Figure 7--Technical Assistance Requested
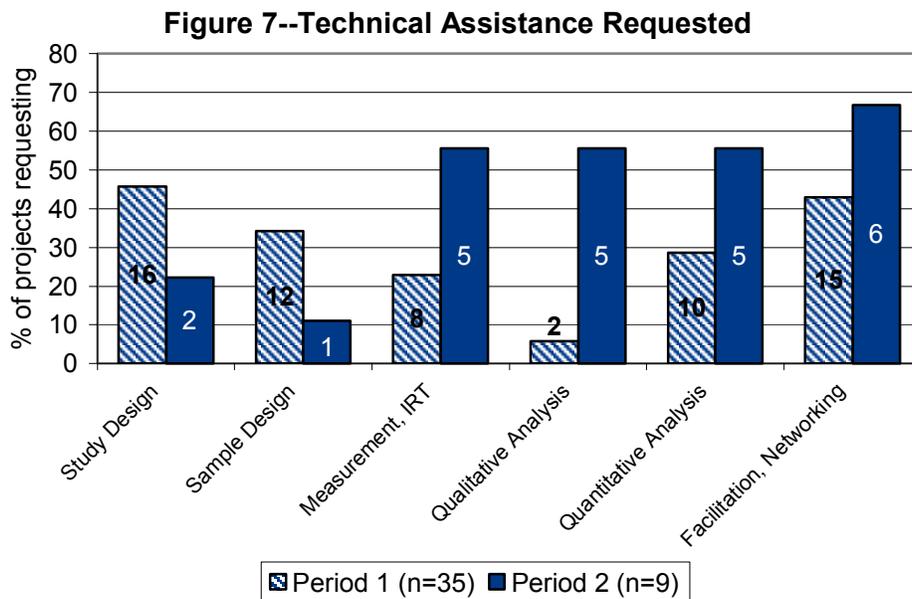
Types of Technical Assistance Provided

As a result of our needs assessment interviews, follow-up contacts were initiated with sixteen PIs in Period 1. These follow-ups led to DRDC's first technical assistance activities—a series of consultations with fourteen projects that had requested immediate technical assistance. In Period 2, DRDC conducted two rounds of telephone calls to: 1) former DRDC clients in order to gain feedback on previous assistance, 2) projects who had not utilized TA in the past in order to touch base, and 3) new IERI projects who had participated in the Needs Assessment interviews (excluding the six most recent projects) in order to describe the TA program and pin-point specific needs. As a result, DRDC already has conducted five more technical assistance consultations during Period 2, three of which were delivered at the Annual Principal Investigator's Meeting held in September of 2004.[3] Three other requests for assistance from the latest round of interviews also have received an initial response, and one draft project proposal is under review.

Design of Projects

In one Contextual project, the PI was concerned about experimental and sample design issues. In particular, this PI wanted to know whether he should proceed with project implementation or should wait until he had a design in place that could demonstrate either (1) a substantial effect of the intervention, or (2) the capacity to include a broader cross-section of teachers than he had been able to recruit up to that time. After discussing these issues, it was recommended that the PI contact the project's program officer, with the result that these concerns were deemed not problematic for the current project. Another investigator simply wanted DRDC to act as a "sounding board" for the research design portion of an IERI project proposal. This led to further consultations and culminated in a visit by a DRDC advisory team to discuss a broad range of issues, including sampling, assessment, instrumentation, and recruitment.

Design for Scale-up

Assistance with scaling up interventions was requested by several PIs. In these cases, DRDC provided information on the different objectives and forms of scale-up research. In one project, for instance, several alternative designs were suggested that would support scale-up objectives, including broadening the study by replicating the intervention in a larger number of sites and implementing the intervention in different contexts. Also discussed was the possibility of shifting the focus of the project to issues of implementation rather than the efficacy of the intervention itself. Such a shift would require collecting additional data on subjects and creating new measures for fidelity of implementation.

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[3] Prior to the meeting, DRDC publicized the availability of in-person consultations, and investigators were invited to schedule a consultation or drop by for an impromptu meeting with one of the members of the DRDC technical assistance team. A copy of the solicitation for assistance can be found in Appendix C.

Three other PIs were interested in issues about the appropriate way(s) to scale-up their projects. In the course of a conference call with DRDC personnel, one of these PIs expressed a desire to collaborate with a researcher who had expertise in scaling up the kind of intervention being used in their study. Since scale-up is a fundamental component of the IERI program, DRDC expressed its commitment to working with IERI staff to develop capacity in this area. Another PI DRDC conferred with, also by way of a conference call, had two areas of concern: scale-up and contamination issues stemming from the use of subjects in both phases of the project. Regarding the former, it was noted that one type of scale-up is to look at one site closely and over time, which would address issues of sustainability, while scale-up by increasing the number of sites would allow for consideration of causal inference. For the latter, the PI expressed a reluctance to "abandon sites [they had] worked with for a long time" in order to implement random assignment. A correlational study was suggested as a way to help plan for a randomized study in the future.

Sample Design

In several cases, investigators expressed a desire for assistance related to sampling. For example, one investigator was assisted in devising a sampling scheme as a strategy to counterbalance low response rates and the prohibitive costs of conducting follow-up interviews with all subjects in the study as originally planned. For other investigators, suggestions were made concerning maximizing response rates, creating control groups, and employing analytic tools for use with multilevel data. One of the DRDC consultations was with a PI who requested information on a fairly obscure theory related to the issue of clustering in small samples. DRDC discussed the issue and provided a list of references which was requested by the PI.

Measurement

A number of other PIs requested information on creating measures and assessments. One PI wanted ideas for measuring an abstract construct. DRDC was able to provide detailed information on how to move from defining the construct to constructing and then validating the measure. Another PI expressed interest in developing instruments for "measuring comprehension when kids really don't read." DRDC's efforts to assist the investigator led to a wider conversation among a small group of IERI researchers, other reading researchers outside the IERI program, and IERI program officers and other senior staff at NSF, NICHD, and IES. The result was a November 2004 meeting of the newly formed Working Group on Research in Reading Comprehension Measures for Young Children. The Working Group is reviewing a draft White Paper based on discussions of the assembled group of experts that summarizes the state of the field and offers suggestions for improving the measurement of comprehension in early readers.

Assessment

Several investigators contacted DRDC's technical assistance team for help with assessment issues. As one PI said, "it would be very helpful to us to talk with someone about the results of our assessment study or results and the design of our assessment study and get some feedback from experienced people about what we have been doing." In one instance, a PI forwarded an IERI proposal and asked for comments. The technical assistance team replied with a two-page summary highlighting key strengths of the study, noting some weaknesses and how they might be addressed and offering some suggestions on minor topics that would improve the overall quality of the proposal.

Item Response Theory

One investigator expressed an interest in and a need for references and practical assistance with issues related to item response theory (IRT). DRDC provided a list of resources, including books that provide good introductions to IRT and suitable software programs. In discussions with the investigator, it was noted that IRT can be used with continuous measures such as growth trajectories as well as with dichotomous and polycotomous items; it can also be used to impute missing data and to increase the efficiency of information gathering through computerized adaptive testing.

Data Analysis

Several investigators expressed interest in obtaining assistance with the analysis of quantitative or qualitative data (see Figure 7). For example, one PI noted that the project's sample size was restricted by "school realities" and wanted help with the statistical analysis of small samples, particularly the ability to control for teacher effects in a between-class study design with limited observations. Other investigators have expressed interest in help analyzing nested or hierarchical data. The coding and analysis of video data is of sufficient interest to the IERI community that DRDC created a breakout session on this topic at the 2004 IERI PI meeting and is planning a special Videography seminar in early December 2005. DRDC also expects to provide more assistance with data analysis as projects near this phase of their research.

To summarize, to date DRDC has worked with IERI projects to:

- Validate coding of an instrument in the field;
- Provide feedback on alternative solutions for dealing with clustering in small samples;
- Comment on draft proposals to conduct research on scale-up;
- Assemble a panel of experts to critique aspects of a project's work;
- Recommend designs for proposed scale-up research;
- Suggest potential collaborators to participate in proposed scale-up research;
- Provide advice on the use of multilevel statistical methods for data analysis;

- Provide assistance in developing and/or identifying instruments to measure fidelity of implementation;
- Provide advice on longitudinal data analysis;
- Provide advice on sample design issues;
- Provide advice on the development and validation of measures; and
- Provide advice on the use of hierarchical linear modeling techniques to analyze project data.

Responses from investigators about DRDC's work have been positive. Moreover, the kinds of technical assistance researchers' requested or expressed interest in are compatible with the areas of expertise represented by the DRDC team. It is anticipated that the demand for technical assistance will only increase over time as additional projects are funded and more investigators learn about the services DRDC can provide.

Next steps

The DRDC needs assessment involved interviews with highly qualified, experienced, and committed researchers from the IERI community. The diversity of this accomplished group should be noted since approximately half of the researchers interviewed are from disciplines outside of education. Responses to items in the interview protocol show that these investigators are committed to professional development and community building. They seek to learn from others in order to make their own projects more effective and to exchange ideas to enhance the quality of educational research in general. Information from the needs assessment also highlights the vital role DRDC has in furthering these goals.

Conducting Research

Results from the needs assessment as well as the technical assistance that has been provided and feedback from the 2004 PI Meeting indicate a strong need for DRDC to serve educational and informational functions within the IERI community. To meet this need, DRDC has compiled a number of research resources and made them available to PIs on its password-protected website. Included are resources for meeting legal requirements, developing assessment instruments, disseminating research findings, and sharing project materials. An "Investigator's Bookshelf" also provides references on a wide range of topics, including study design, statistical methods, measurement and assessment, qualitative methods, and research on scale-up.

Although the focus of the DRDC technical assistance program is providing methodological and analytic assistance, many of the PIs interviewed suggested expanding DRDC's facilitating and mediating functions. One PI expressed an interest in having "partnering" opportunities where individuals with expertise in scale-up, for example, could join with researchers who want to expand the scope of their projects. The PI noted that in fostering collaborative efforts, "having investigators who are not

vested in particular projects . . . conducting an objective evaluation may be the most appropriate way to learn if an intervention can be brought to scale."

Suggestions also were made for DRDC to facilitate researchers' access to schools and schools' access to educational innovations since, as one PI said, "it's not enough for IERI to trade hot tips on a particular school that [is] willing to work with them because that school would get bombarded." Rather, it was suggested that DRDC serve as a clearinghouse—that is, be the initial contact for schools to receive referrals to different research initiatives that interest them as well as recruiting schools to participate in projects that may be of particular relevance to them. Also mentioned as a role for DRDC is serving as a mediator (or "interpreter") for researchers who are monitored by and have to work with policy makers and people in administrative positions because "there is no natural place where researchers and school administrators or curriculum developers really interact."

Community Building

Enhancing communication and community building were issues raised in a number of interviews. In the area of communication, reference was made to using information technology to provide technical assistance. Suggestions ranged from providing email consultations to video streaming modules on the internet to initiating a chat line between IERI investigators and experts from different fields. Investigators more often reported a desire to have opportunities for unscripted interactions between people from different agencies and different areas and levels of expertise; they stressed the importance of building relationships and engaging in informal, intellectual exchanges of ideas.

Community building interactions can be facilitated by DRDC by creating opportunities for researchers to meet and converse in different settings such as structured meetings or workshops. In particular, one PI proposed that DRDC facilitate a dialogue between two communities of educational researchers: those "who design experiments (and use random assignment) and those who work with the 'messy' complexities of implementing interventions" and fomenting changes in schools and schooling. To date, DRDC has organized the reading workshop already described, is planning a workshop on videography, and has made video of presentations (and associated materials) at the 2004 PI Meeting available on its website.

Another way to enhance capacity is through sharing data and assessment instruments. While virtually all of the PIs interviewed indicated they would be willing to participate in data sharing, two obstacles were mentioned frequently. First, concerns regarding confidentiality were raised. More than one PI proposed that our technical assistance team could facilitate investigators' interactions with the IRB. Second, money issues were raised in that preparing data for sharing is "costly and time consuming." Sharing research tools is less complicated, and DRDC is in the process of building an online library of IERI assessment instruments.

Perhaps the most encouraging outcome of the needs assessment was the obvious commitment of IERI investigators to professional development and to increasing the quality of their research. These highly qualified researchers, many of whom are leaders in their respective disciplines, recognize the importance of teamwork, data sharing, and knowledge development. The overwhelming majority welcome efforts to increase communication between investigators and to build a community of researchers concerned with bringing promising educational interventions to scale. As a result, DRDC will continue to conduct needs assessments as additional IERI projects are funded and notification of funding becomes available.

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Appendix A

CONSENT BY SUBJECT FOR PARTICIPATION IN RESEARCH PROTOCOL
Research Project: Scale-up research needs assessment

Principal Investigator: Barbara Schneider   Protocol # 021202

I, _____, hereby consent to participation as a subject in the above-named research project, conducted under the direction of the above named person at the University of Chicago. My consent is given of my own free choice without undue inducement, and after the following things have been explained to me.

1. NATURE AND DURATION OF PROCEDURES

The Data Research and Development Center (DRDC) was established at NORC as part of the Interagency Education Research Initiative (IERI) effort to: provide technical support to IERI projects based on pertinent needs analyses; promote community building among IERI investigators; and conduct research related to the IERI mission. Among other things, DRDC has been asked to conduct a needs analysis to precede and guide the provision of technical assistance to projects receiving IERI funding. Specifically, DRDC has been asked to contact PIs from all existing IERI projects to ascertain their interest in and need for technical assistance or training in methods that will enhance their study design, instrumentation, or data analysis. DRDC has also been asked as part of this needs analysis to survey current IERI project investigators to understand how community building can assist their work and the success of their projects.

This interview is being conducted as part of the scale-up research needs assessment that has been designed to fulfill these obligations. At the same time, it will provide information necessary to clarify the nature of effective scale-up of research pertinent to educational improvement, and to enable DRDC to fulfill its obligation of collaborating with the NSF in launching a field of inquiry concerned with understanding scaling-up and its vital parameters. The interview will take approximately 90 minutes to complete. This interview will be tape-recorded.

Once the interview has been completed, DRDC may contact me to clarify or elaborate on my answers. Based on the information I provide today, DRDC may contact me at some point in the future to ask if I would like to learn more about technical assistance and community building services DRDC will be offering, or if I would like to participate in other scale-up research DRDC may conduct.

(continued)

2. POTENTIAL RISKS AND BENEFITS

Information obtained during the course of this investigation may be used to target distribution of technical assistance & community building services provided by the Data Research and Development Center (DRDC) under terms of a Cooperative Agreement between the National Science Foundation (NSF) & NORC. Information obtained during the course of this investigation may also be used by DRDC in its work to improve the collective understanding of the challenges of scale-up effort through statistical analysis, and to develop theoretical and technical structures that can advance understanding of the meaning and methods of scaling up exemplary approaches to education.

3. POSSIBLE ALTERNATIVES

My participation is entirely voluntary, and I may decline to answer any of the questions asked.

4. ADDITIONAL ELEMENTS OF INFORMED CONSENT

Data obtained during the course of this investigation may be used for future research conducted by the Principal Investigator or other research associates and staff of the DRDC *provided* the data are not, without the subject's explicit written consent, individually identifiable.

I have had the opportunity to ask questions concerning any and all aspects of the project and my questions have been answered. I understand that participation is voluntary and that I may withdraw my consent at any time without prejudice to me. Confidentiality of records concerning my involvement in this project will be maintained in an appropriate manner. When required by law, the records of this research may be reviewed by applicable government agencies. A copy of this written consent has been given to me. I understand that if I have any questions concerning this research, I can contact the Principal Investigator or the individuals stated overleaf.

_____   _____
Signature of Subject   Date

_____
Signature of Principal Investigator or
his/her Authorized Representative

(continued)

If you have any further questions you may contact:

Sarah-Kathryn McDonald
Executive Director
Data Research and Development Center
NORC at the University of Chicago
1155 East 60th Street, Room 277
Chicago, Illinois 60637
(773) 256 6199
mcdonald-sarah@norcmail.uchicago.edu

Kathleen Parks
IRB Administrator
NORC
1155 East 60th Street, Room 341A
Chicago, Illinois 60637
(773) 256 6302

Appendix B

DRDC Needs Assessment Protocol

DRDC Needs Assessment--Year One

Respondent #1: _____   Interviewer: _____

Respondent #2: _____   Date: _____

Respondent #3: _____

···

Interview Protocol

I. Preliminary Information

Thank you for meeting with me.

The DRDC was funded by the Interagency Education Research Initiative to conduct research on scale-up and to carry out a needs assessment that would help facilitate communication among IERI projects, and identify the kinds of technical assistance that project PIs and staff may find helpful.

The overriding goal of the needs assessment is to explore with IERI investigators how research on scale-up can be beneficial to policymakers, practitioners, and other researchers, and can improve student learning.

If you do not mind, I would like to tape record this interview. Is that okay?

*** TURN ON TAPE RECORDER ***

TURN PAGE & BEGIN INTERVIEW
II.   Research Objectives and Knowledge Claims

1.)   I understand that you are studying [Insert]. Can you tell me more about what you are trying to learn?

> ***IF THE PROJECT INVOLVES AN INTERVENTION, PROBE:***
> - What are the objectives of your intervention?
>
> - Could you tell me more about how your intervention is designed to produce its objectives?
>
> - What theory and/or treatment led to the development of this intervention?

2.)   Could you tell me a little more about what motivated you to research this topic? What prompted you to undertake this research?

3.)   What knowledge claims do you hope to make at the conclusion of this project?

4.)   Has the direction of your project changed since its inception?

> ***IF YES, PROBE:***
> - What changed?
>
> - Why? What led to that change?

III. Research Design and Generalizability of Findings

Now I would like to ask you a few questions about how you are conducting your research, and if you expect your findings to be generalizable.

5.) A few minutes ago you explained that you want to be able to *[PARAPHRASE KNOWLEDGE CLAIMS THEY SEEK TO MAKE]*.

What evidence will you use to support these claims?

6.) How have you designed this research to gather this kind of evidence?

PROBE:
- What technological tools do you employ in collecting your data?

7.) How will you use this evidence to assess the theory and/or treatment you are examining?

*PROBE***:**
- What types of evidence address specific aspects of your theory and/or treatment?

- How does this evidence inform your long-term goals?

8.) What performance measures or other indicators are you using as outcomes?

PROBE:
- What led you to select these measures or indicators for this research?

- What inferences are you able to make on the basis of these indicators?

FOR PROJECTS THAT INVOLVE AN INTERVENTION, PROBE:
- What do these indicators tell you about the impact of the intervention and whether it is achieving -- or has achieved -- its objectives?

9.) How generalizable do you think your findings are, or will be?

10.) Are there limits to the generalizability of your findings?

11.)   Can you tell me how you think this knowledge may be used in other contexts?

PROBE:
- Do you think it would be useful in schools or school systems with different student populations?

- Do you think it would be useful in schools or school systems with different teacher populations?

- Do you think it would be useful at other grade levels, or for other subjects?

12.)   What steps are you taking to ensure that your findings can be applied in other situations?

13.)   Do you think it would be appropriate for teachers, district administrators, or policy makers to use your research findings to make decisions about how well your intervention works?

PROBE:
- Why or why not?

IV.   Conceptualizations of Scale-up

Now I would like to ask you some questions about scale-up, what you think it means to scale-up promising interventions, and what contributions you think this research can make.

14.)   IERI uses the term "scale-up" to refer to the goals of its program. What does "scale-up" mean to you?

15.)   How are you bringing your project to scale?

16.)   Do you and your colleagues actually use the term scale-up in describing the purposes of your IERI research?

   IF NO, PROBE:
   * What term or terms do you use to talk about that?

17.)   Do you think the members of your project generally agree on what scale-up means? I'm thinking about things like how scale-up should be done, and the most important considerations when scaling-up an intervention.

   IF NO, PROBE:
   * What are the key areas of disagreement or lack of clarity?

18.)   Has your view of what it means to scale-up changed over the life of this project?

   IF YES, PROBE:
   * How?

19.)   What research on scale-up has most influenced your own thinking about these issues?

20.)   What literature about scale-up do you most frequently cite in your writings on the subject?

21.)   Why do you cite that literature so frequently? What is it about that work that you find so compelling?

22.)   Do you think your colleagues outside of this project think about these issues in this way?

PROBE:
- Do they commonly use the phrase scale-up when talking about these issues?

- Are there other terms they use when referring to what IERI calls scale-up?

IF YES, PROBE:
- What are they?

V.   Technical Assistance

Next, I would like to learn more about the people who are currently involved in your project and the types of technical assistance that might be useful to you and/or the other members of your project.

23.)   IERI project teams often bring together people with a wide range of skills and experience, including policy professionals, education analysts, survey researchers, statisticians, and others. Can you tell me a little about the composition of your research team?

> ***PROBE:***
> - What types of methodological expertise are represented on your team?

Now I'd like to ask you a series of questions about various forms of technical assistance others have suggested could be useful to education research projects like these.

24a.)   Would assistance with planning the study design have been helpful on this project?

☐   NO   ***SKIP TO 24b***

☐   YES   ***CONTINUE WITH 24a1***

24a1.) Who would benefit from such help?

24a2.) How would this help have been useful?

24a3.) Did you arrange to obtain this assistance?

☐   NO   ***SKIP TO 24b***

☐   YES   ***CONTINUE WITH 24a4***

24a4.) Who provided it?

24a5.) Was it as useful as you had hoped it would be?

24a6.) Could anything have made it more useful?

24b.)   Would assistance with sample design be helpful on this project?

☐   NO   ***SKIP TO 24c***

☐   YES   ***CONTINUE WITH 24b1***

24b1.) Who would benefit from such help?

24b2.) How would this help be useful?

24b3.) Have you arranged to obtain this assistance?

☐   NO   ***PROBE*****:** Why is that?
SKIP TO 24c

☐   YES   ***CONTINUE WITH 24b4***

24b4.) Who provided it?

24b5.) Was it as useful as you had hoped it would be?

24b6.) Could anything have made it more useful?

24c.)   Would assistance with the statistical analysis of small samples be helpful on this project?

☐   NO   ***SKIP TO 24d***

☐   YES   ***CONTINUE WITH 24c1***

24c1.) Who would benefit from such help?

24c2.) How would this help be useful?

24c3.) Have you arranged to obtain this assistance?

☐   NO   ***PROBE***: Why is that?
SKIP TO 24d

☐   YES   ***CONTINUE WITH 24c4***

24c4.) Who provided it?

24c5.) Was it as useful as you had hoped it would be?

24c6.) Could anything have made it more useful?

24d.) Would assistance with scale construction or item response theory be helpful on this project?

☐ NO *SKIP TO 24e*

☐ YES *CONTINUE WITH 24d1*

24d1.) Who would benefit from such help?

24d2.) How would this help be useful?

24d3.) Have you arranged to obtain this assistance?

☐ NO *PROBE:* Why is that?
SKIP TO 24e

☐ YES *CONTINUE WITH 24d4*

24d4.) Who provided it?

24d5.) Was it as useful as you had hoped it would be?

24d6.) Could anything have made it more useful?

24e.) Would assistance with experimental or quasi-experimental design be helpful on this project?

☐ NO *SKIP TO 24f*

☐ YES *CONTINUE WITH 24e1*

24e1.) Who would benefit from such help?

24e2.) How would this help be useful?

24e3.) Have you arranged to obtain this assistance?

☐ NO *PROBE:* Why is that?
SKIP TO 24f

☐ YES *CONTINUE WITH 24e4*

24e4.) Who provided it?

24e5.) Was it as useful as you had hoped it would be?

24e6.) Could anything have made it more useful?

24f.)   Would assistance with longitudinal study design be helpful on this project?

☐   NO   *SKIP TO 24g*

☐   YES   *CONTINUE WITH 24f1*

24f1.) Who would benefit from such help?

24f2.) How would this help be useful?

24f3.) Have you arranged to obtain this assistance?

☐   NO   *PROBE:* Why is that?
SKIP TO 24g

☐   YES   *CONTINUE WITH 24f4*

24f4.) Who provided it?

24f5.) Was it as useful as you had hoped it would be?

24f6.) Could anything have made it more useful?

24g.)   Would assistance with multilevel statistical methods be helpful on this project?

☐   NO   *SKIP TO 24h*

☐   YES   *CONTINUE WITH 24g1*

24g1.) Who would benefit from such help?

24g2.) How would this help be useful?

24g3.) Have you arranged to obtain this assistance?

☐   NO   *PROBE*: Why is that?
SKIP TO 24h

☐   YES   *CONTINUE WITH 24g4*

24g4.) Who provided it?

24g5.) Was it as useful as you had hoped it would be?

24g6.) Could anything have made it more useful?

24h.)   Would assistance with statistical methods for longitudinal studies be helpful on this project?

☐   NO   ***SKIP TO 24i***

☐   YES   ***CONTINUE WITH 24h1***

24h1.) Who would benefit from such help?

24h2.) How would this help be useful?

24h3.) Have you arranged to obtain this assistance?

☐   NO   ***PROBE*****:** Why is that?
SKIP TO 24I

☐   YES   ***CONTINUE WITH 24h4***

24h4.) Who provided it?

24h5.) Was it as useful as you had hoped it would be?

24h6.) Could anything have made it more useful?

24i.)   Would assistance with qualitative research methods be helpful on this project?

☐   NO   ***SKIP TO 24j***

☐   YES   ***CONTINUE WITH 24i1***

24i1.) Who would benefit from such help?

24i2.) How would this help be useful?

24i3.) Have you arranged to obtain this assistance?

☐   NO   ***PROBE*****:** Why is that?
SKIP TO 24j

☐   YES   ***CONTINUE WITH 24i4***

24i4.) Who provided it?

24i5.) Was it as useful as you had hoped it would be?

24i6.) Could anything have made it more useful?

24j.)   Would assistance with collection of behavioral observation data be helpful on this project?

☐   NO   **SKIP TO 24k**

☐   YES   **CONTINUE WITH 24j1**

24j1.) Who would benefit from such help?

24j2.) How would this help be useful?

24j3.) Have you arranged to obtain this assistance?

☐   NO   **PROBE:** Why is that?
SKIP TO 24k

☐   YES   **CONTINUE WITH 24j4**

24j4.) Who provided it?

24j5.) Was it as useful as you had hoped it would be?

24j6.) Could anything have made it more useful?

24k.)   Would assistance analyzing behavioral observation data be helpful on this project?

☐   NO   **SKIP TO 24l**

☐   YES   **CONTINUE WITH 24k1**

24k1.) Who would benefit from such help?

24k2.) How would this help be useful?

24k3.) Have you arranged to obtain this assistance?

☐   NO   **PROBE:** Why is that?
SKIP TO 24L

☐   YES   **CONTINUE WITH 24k4**

24k4.) Who provided it?

24k5.) Was it as useful as you had hoped it would be?

24k6.) Could anything have made it more useful?

24l.)　Would assistance finding instruments to measure outcomes be helpful on this project?

☐　NO　***SKIP TO 24m***

☐　YES　***CONTINUE WITH 24l1***

24l1.) Who would benefit from such help?

24l2.) How would this help be useful?

24l3.) Have you arranged to obtain this assistance?

☐　NO　***PROBE*: Why is that?**
SKIP TO 24m

☐　YES　***CONTINUE WITH 24l4***

24l4.) Who provided it?

24l5.) Was it as useful as you had hoped it would be?

24l6.) Could anything have made it more useful?

24m.)　Would assistance finding instruments to measure implementation be helpful on this project?

☐　NO　***SKIP TO 24n***

☐　YES　***CONTINUE WITH 24m1***

24m1.) Who would benefit from such help?

24m2.) How would this help be useful?

24m3.) Have you arranged to obtain this assistance?

☐　NO　***PROBE*: Why is that?**
SKIP TO 24n

☐　YES　***CONTINUE WITH 24m4***

24m4.) Who provided it?

24m5.) Was it as useful as you had hoped it would be?

24m6.) Could anything have made it more useful?

24n.)   Would assistance with data analysis be helpful on this project?

☐   NO   ***SKIP TO 24o***

☐   YES   ***CONTINUE WITH 24n1***

24n1.) Who would benefit from such help?

24n2.) How would this help be useful?

24n3.) Have you arranged to obtain this assistance?

☐   NO   **PROBE:** Why is that?
SKIP TO 24O

☐   YES   ***CONTINUE WITH 24n4***

24n4.) Who provided it?

24n5.) Was it as useful as you had hoped it would be?

24n6.) Could anything have made it more useful?

24o.)   Would assistance with data archiving be helpful on this project?

☐   NO   ***SKIP TO 24p***

☐   YES   ***CONTINUE WITH 2401***

24o1.) Who would benefit from such help?

24o2.) How would this help be useful?

24o3.) Have you arranged to obtain this assistance?

☐   NO   ***PROBE:*** Why is that?
SKIP TO 24P

☐   YES   ***CONTINUE WITH 24o4***

24o4.) Who provided it?

24o5.) Was it as useful as you had hoped it would be?

24o6.) Could anything have made it more useful?

24p.) Would assistance with data mining or exploratory data analysis be helpful on this project?

☐   NO   ***SKIP TO 24q***

☐   YES   ***CONTINUE WITH 24p1***

24p1.) Who would benefit from such help?

24p2.) How would this help be useful?

24p3.) Have you arranged to obtain this assistance?

☐   NO   ***PROBE*****: Why is that?**
SKIP TO 24Q

☐   YES   ***CONTINUE WITH 24p4***

24p4.) Who provided it?

24p5.) Was it as useful as you had hoped it would be?

24p6.) Could anything have made it more useful?

24q.) Would assistance with geographical information systems (GIS) models and/or spatial statistical analysis be helpful on this project?

☐   NO   ***SKIP TO 24r***

☐   YES   ***CONTINUE WITH 24q1***

24q1.) Who would benefit from such help?

24q2.) How would this help be useful?

24q3.) Have you arranged to obtain this assistance?

☐   NO   ***PROBE*****: Why is that?**
SKIP TO 24R

☐   YES   ***CONTINUE WITH 24q4***

24q4.) Who provided it?

24q5.) Was it as useful as you had hoped it would be?

24q6.) Could anything have made it more useful?

24r.)   Would assistance with data security be helpful on this project?

☐   NO   ***SKIP TO 25***

☐   YES   ***CONTINUE WITH 24r1***

24r1.) Who would benefit from such help?

24r2.) How would this help be useful?

24r3.) Have you arranged to obtain this assistance?

☐   NO   ***PROBE*****:** Why is that?
SKIP TO 25

☐   YES   ***CONTINUE WITH 24r4***

24r4.) Who provided it?

24r5.) Was it as useful as you had hoped it would be?

24r6.) Could anything have made it more useful?

VI. Data Sharing

25.)   Data sharing has become a major topic of interest among funders. Are you currently sharing research material with others?

IF YES, PROBE:
- What material are you sharing?

26.)   Do you have plans to share material with others later?

IF YES, PROBE:
- What will you share?
- Would you consider sharing measures?
- Would you consider sharing preliminary results?
- Would you consider sharing draft publications?

27.)   At what point of your project would you consider sharing data?

28.)   Would you be comfortable making your database available for public use?

PROBE:
Why or why not?

29.)   Do you foresee any problems in constructing linkable data sets that would become public data sets?

PROBE:
Why or why not?

VII. Data Archiving and Confidentiality

30.)   Any kind of data archiving raises potential problems of confidentiality and protecting the proprietary rights of those who collect data. What confidentiality and proprietary concerns would archiving data raise for your project?

PROBE:
- How do you think they could best be addressed?

31.)   Privacy and confidentiality concerns can also pose problems for research that involves combining information from different sources. Have you had any concerns, or encountered problems?

IF YES, PROBE:
- What are they?

32.)   Have you thought about issues such as . . .

…. obtaining access to privileged data?

…. establishing and maintaining secure data files?

…. sharing your data with others?

33.)   How do you currently store your research data?

PROBE:
- What technological tools do you use to store your data?
- What kinds of restrictions do you have on your data sets?
- Would it be possible for you to store your data sets elsewhere such as in a central location with other research data sets?

VIII. Research Interests and Professional Aspirations

34.)   I understand this research project is expected to continue until [Insert].

Once this project is completed, do you plan to conduct research on questions of scale-up in the future?

35.)   Could you tell me whether you have been involved in research on scaling-up educational interventions in the past, or are you involved in any other research on scale-up right now?

IF YES, PROBE:
- Could you tell me a little about that work?

- Would it be possible to obtain descriptions of those studies, and any reports you've written about them?

36.)   How would you characterize yourself as a scholar in terms of discipline and position within the discipline?

ALLOW RESPONDENT TO ANSWER IN HIS/HER OWN WORDS. IF NECESSARY, PROBE:
For example, would you describe yourself as …
- an experimental cognitive psychologist?
- a cognitive psychologist more interested in classroom-centered cognition?
- a science educator?
- a teacher educator?

IX. Closing

Those are all the questions that I have. Is there anything you think I have missed? Is there anything else DRDC should be asking, or that you would like to say, about how to improve research on scale-up, or the impact that research can have on programs and policies that affect student learning?

Thank you again for your time. We really appreciate it, and look forward to providing you with a report on what we learn.

*** *TURN OFF TAPE RECORDER* ***

Appendix C

THE INTERAGENCY EDUCATION RESEARCH INITIATIVE
ANNUAL PRINCIPAL INVESTIGATORS' MEETING
September 9–10, 2004 • Washington, DC

Investigator name: _____

Best form of contact: _____

Project Title: _____

Question in regards to:

☐   Design

☐   Instrumentation

☐   Qualitative research methods

☐   Analysis

☐   Data security, archiving, sharing

☐   Other

Details of question/request:

_____
_____
_____
_____
_____
_____
_____
_____
_____

Recorded by: _____