ies NATIONAL CENTER FOR EDUCATION RESEARCH
Institute of Education Sciences

IES Rural Education Technical Working Group Meeting Summary

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Capital Place
80 F Street, NW
IES Boardroom
Washington, DC

Technical Working Group Members

Invited Participants

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Meeting Summary

Introductions and Objectives for Meeting

Thomas Brock called the meeting to order at 9:10 a.m. and welcomed the participants. He and Joan McLaughlin have been taking stock of programs at the Institute of Education Sciences (IES) programs and soliciting input from the public, researchers, and practitioners about improving the programs the National Center for Education Research (NCER) and the National Center for Special Education Research (NCSER) support. In particular, they are seeking comments on unmet needs that NCER and NCSER could address. Dr. Brock said that requests for applications (RFAs) go out in the spring, and participants are welcome to suggest changes to existing programs or highlight new opportunities. Dr. Emily Doolittle emphasized that the goal of the meeting was to gather participants' best thinking about emerging needs.

Dr. McLaughlin added that she is concerned about rural education for two reasons. First, children with disabilities have a hard time finding support in rural areas. Second, it is often difficult to include children from rural areas in the research NCSER supports.

Current Issues in Rural Education Research

Participants were asked to describe briefly the big issues they see in their work in rural education. Their responses are summarized and grouped under common themes listed below. (Commenters are identified by their initials in parentheses.)

Community and Context

Researchers should better understand the rural communities in which they work (AB, DW). The demographics of rural communities and their school populations are changing (HH, SS). Schools need flexibility to adapt to their communities' local context, needs, and changing demographics (DW). The political context, such as historic, concentrated poverty, and oppression, has an impact on the community and schools (DW). Technology can seem like a panacea, but not all the answers come from the outside. How can rural communities inform the impact of technology on rural areas (CX)? The focus needs to be on place and how deeply innovation goes, not how many people get through a program (DW).

People in small towns value work and place. Individuals' connections to their communities could be leveraged to combat brain drain (LVF, TF). Job opportunities in the community and student career goals should inform educational research and programs. The oil boom in North Dakota and the natural gas boom in northern Pennsylvania, for example, are bringing money to rural areas. However, the job opportunities provided by such industries may

result in communities placing *less* value on education, not more (TF, HH). The service economy has replaced manufacturing and other industries in resource-rich rural areas. Service jobs have nonstandard hours, and this affects afterschool programming, among other issues (LVF). In communities where a lot of parents are ex-offenders, school policies can prevent meaningful parent engagement (DW). Improving education through research should be framed as part of an effort to revitalize rural economies, and parents and communities should be encouraged to promote education that contributes to revitalizing the local economy (HH, DW). There is a need for investment in innovation in rural America (LVF).

Dissemination and Communication of Findings

The research community is struggling with communicating results internally, let alone disseminating them widely (AB). More efforts are needed to coordinate dissemination of research results and evaluation of program uptake and implementation (JL). Rural teachers need better access to current, evidence-based practices on instruction, learning, and professional development (SS). There is no systematic approach to communicating or disseminating findings among rural educators (SS). Schools and communities should take advantage of their strengths. Instead of telling rural communities what is wrong, tell them what they are doing right (CX). New models of communication and dissemination are needed (SS). Researchers are not good at marketing their programs (SS).

Potential Strategy: Instead of focusing research on building the knowledge/evidence base, engage the community and partners first to determine what supports are needed and what delivery formats could be effective (TF).

Funding and Resources

Rural schools lack the resources to respond adequately to student needs (e.g., travel in hazardous weather) (CX). Even in locations where the tax base is growing, schools are not getting more funding (LS). Small schools with limited resources find it challenging to bring in new, scientifically validated educational approaches (SS, LVF, LS). Schools with limited resources cannot sustain effective programs (LVF). Leaders may not always use their existing resources as fully as they might due to a lack of creative thinking or due to restrictive rules, both actual and perceived (DW). Lack of resources leads to inequities across the state (JL). Education service agencies play a major role for a lot of rural school districts, but their importance to rural schools and districts is not recognized nor understood enough in the policy and research communities(AB).

Potential Strategy: Use technology, such as virtual mentors, to gain access to program (SS).

Potential Strategy: University Centers for Excellence in Developmental Disabilities (UCEDD) may be a model to provide technical assistance, professional development, and research responsive to state and local needs in rural education (TF)[1].

Partnerships

There is a need for partnerships between researchers and practitioners (KP). Partners should develop research questions together, and this will improve research relevance and also enhance dissemination and communication (KP). Researchers need more opportunities to listen to and learn from practitioners (KP). Rigorous, methodologically sound research requires a different approach in a small school with no infrastructure to support data collection and program implementation (SS). School districts should develop positive, sustainable relationships with Native American tribal communities and create supports that align with their needs (CX). To sustain good programs, there should be a context for joint responsibility and partnerships (SS). Efforts are needed to foster long-term partnerships between universities and low-wealth rural communities (LVF).

Potential Strategy: School districts should partner with businesses, universities, education service agencies, and others who are committed to place (LVF, LS).

Psychosocial and Behavioral Needs of Students

Income inequality affects educational outcomes more than any other factor (AB). Researchers should be mindful of social and economic disparities (AB). Rural communities lack support services to address psychosocial issues, such as poverty, mental health issues, substance abuse, and the impact of racism and discrimination (CX, LS, SS). In rural areas, schools play a central role in linking families to services. There is a need for coordination of education programs and social services from pre-K through the transition to postsecondary learning (JL). School districts need incentives to create outreach efforts around services (JL).

Research Design and Implementation

Rural cohorts should be included in study design upfront (HH). A cadre of rural researchers should be cultivated (HH). Research planning should take into account the time needed to build relationships (HH). Rural researchers should bring resources back into the rural communities they study (CX). Feasibility and capacity must be part of research design (SS, HH). Research findings should be better communicated (HH). Research planning should take into account how results will be communicated and disseminated (HH, AB). Programs should include sustainable mechanisms for collecting data and implementing programs

[1] According to the Association for University Centers on Disabilities, "there are 67 UCEDDs - at least one in every US state and territory - that are in a unique position to facilitate the flow of disability-related information between community and university." See http://www.aucd.org/template/page.cfm?id=24.

(SS). Interdisciplinary research is needed to identify promising practices around critical issues in rural education (HH). Methodological and statistical approaches should be more responsive to the rural environment (AB). Researchers should assess whether there are lessons to be learned from research on students in urban schools and those with special needs who face the same challenges as those in rural schools (i.e., lack of resources, low wealth, low critical mass, lack of teacher recruitment and retention, and lack of teacher training and professional development) (HH, TF). It is not clear how more charter schools in low-wealth rural places will affect public schools. Research should assess what school choice looks like in rural places. What could be done more effectively or differently in public schools (DW)?

Research Utility

Research questions should be responsive to the field (AB). Researchers should better demonstrate the relevance of their findings to practitioners. (HH, AB). Researchers should communicate the value of research as a way to solve problems (HH). Education research often identifies problems but does not offer practical solutions or replicable programs (LS, HH). Schools need more guidance on how to implement effective programs (e.g., specifics about training and logistics) (LS). Research initiatives should build the evidence base in ways that lead to products and training opportunities (TF). Sustainability must be considered in rural settings (SS, HH, TF). There is almost no research on the role of education service agencies (HH).

Special Needs of Native American Communities

Schools need culturally relevant curricula that depict Native American language and history in positive ways (CX). There is a lack of support for special education in Native American communities (CX). There are few leadership opportunities for Native American youth (CX). More attention is needed to Native American youth making the transition to college and career outside the Native American community (CX).

Teacher/Administrator Recruitment and Retention

New teachers receive little, if any, support (leading to high attrition rates). Long-time teachers also need support (LS, SS). Teachers need emotional as well as professional support (LVF). Related issues, such as housing, recreation, and social outlets, need to be addressed (DW, LS). People new to rural areas need to better understand what it means to live, work, and connect with people in a rural community (DW, HH). Even schools that invest in training and provide bonuses see high turnover. More research is needed to determine what works for recruitment and retention (LVF, DW). More research is needed on what makes an effective “grow-your-own” model because young people often leave (once they get training or scholarships) and do not return to their rural communities (DW).

Potential Strategy: Combine a grow-your-own approach with programs or incentives to bring former students back to the community to talk to current students, keeping them connected to their communities (TF).

Teacher/Administrator Training

Teachers and administrators need leadership training specific to the rural environment—for example, how to build and sustain community partnerships (CX, HH, AB). Teachers and administrators lack the skills, knowledge, and capacity to gather, interpret, and use data (LS, DW). More research is needed on what works for successful rural teachers in low-wealth areas and those who work with challenging students (LS, DW). Teach for America provides motivated, enthusiastic individuals to classrooms, but they have no teacher training (LVF). Rural teachers have multiple roles and jobs, so they have no time for professional development (LS). Administrators lack the knowledge and training to evaluate and supervise teachers (LS).

Overview of Prior Large-Scale IES Investments in Rural Education Research

Two principal investigators of IES-funded research centers gave presentations that focused on rural research, followed by questions and discussion. The presentations and resulting discussion are summarized here.

The National Research Center on Rural Education Support (NRCRES)—University of North Carolina, Chapel Hill (2004–2009)

Tom Farmer

Dr. Farmer summarized the overarching aims of NRCRES:

- Focus on low-resource communities and diverse populations;
- Explore issues across the country;
- Respond to local issues and interests;
- Assess programs from kindergarten through grade 12;
- Emphasize professional development needs (including how to build on professional development that works well in rural areas); and
- Use technology to provide supports.

The Center's Targeted Reading Intervention (TRI) sought to help rural teachers provide intensive diagnostic instruction for children who struggle with reading when they begin school. Teachers and struggling students partnered with a skilled reading coach/consultant using videoconferencing in 15-minute sessions of reading and coaching. The program is extremely cost-effective and allows rural teachers to take advantage of an effective training model using simple

technology. The intervention had positive effects on struggling readers (and on those who were not struggling), and teachers' instructional skills improved.

Lynne Vernon-Feagans, who oversaw TRI, said teachers preferred the virtual coaching over a face-to-face version of the intervention because it provided immediate feedback while the teacher was interacting with the student. Rural teachers appreciated that the technology enabled them to get a lot of guidance from the consultant.

The Rural Early Adolescent Learning Program (Project REAL) focused on middle school students at risk of school disengagement, which can lead to failure or dropping out of school later on. Through Project REAL, researchers assessed whether a student's academic struggles were related to behavioral or social challenges. Teachers were trained (in person, with additional support online) in strategies to promote academic engagement, positive behavior, and positive social dynamics. The program included preliminary site visits to assess the needs and resources of the school, and the intervention was tailored accordingly. Project REAL improved students' engagement, sense of belonging, and sense of teacher support. Teachers were able to foster a positive, supportive peer culture, and bullying was reduced.

The Distance Education and Enhanced Rural Online Learning (EROL) effort enabled schools to use online learning when there were not enough students or teachers to support classroom instruction (e.g., for Advanced Placement [AP] classes). Some rural schools see high dropout rates with online courses because of students' lack of support from or engagement with teachers. The EROL program helped prepare facilitators in schools to support engagement in online courses. The program succeeded in reducing dropout rates, but it had no impact on students' AP scores (this may be a reflection of a student's preparedness for the course).

To shed light on why many rural students struggle with postsecondary education, the Rural High School Aspirations study aimed to illuminate factors related to students' educational outcomes, such as their career aspirations, postsecondary planning, family and community supports, and high school success. Most of the students surveyed wanted to complete bachelors or advanced degrees (or at least technical training). When identifying careers of interest, the largest percentage aspired to health care. Nearly three-quarters expected to settle in a rural area. The study did not support the concept of "rural brain drain." In fact, students who struggled the most were those who most wanted to leave; those not struggling were strongly connected to their rural roots. The study also provided interesting findings about the source of career information and advice and how school and family factors affect postsecondary planning.

Dr. Farmer said the NRCRES identified some commonalities across rural communities:

- Each rural community believes it is unique.
- Changing demographics and economic factors have a strong impact on schools, and their needs can shift rapidly.
- Lack of critical mass and geographic isolation pose barriers.
- Rural schools face challenges in recruiting, training, and retaining teachers.
- Rural schools have a strong commitment to local issues and the concept of place (e.g., general perception that schools should serve the purpose of the community).

From these findings, Dr. Farmer concluded that researchers should understand and be responsive to the communities they serve. Because of the diversity of rural communities, it is difficult to locate comparable sites for randomized studies. The variability across communities leads to higher research costs (e.g., more money is needed to collect sufficient data). Remote locations mean higher travel costs for researchers. Finally, Dr. Farmer concluded that place matters. Rural communities have a strong sense of pride and loyalty. They expect that curriculum and instruction will be linked to the sense of place, and they see schools as a primary anchor of the community.

The National Center for Research on Rural Education (R^2Ed)—University of Nebraska (2009–2014)

Sue Sheridan

Dr. Sheridan described the themes that underlie R^2Ed's work:

- Helping children growing up in rural America develop skills to succeed;
- Understanding the ecological context of rural communities that influences and supports learning; and
- Increasing availability of and access to cutting-edge research that illuminates what works for whom and in what context in rural America.

The immediate goals of R^2Ed are to improve rural students' education by helping teachers deliver evidence-based practices, improving the quality of education through innovative professional development, and creating partnerships among stakeholders to support education. Dr. Sheridan presented an organizational chart that depicted how external stakeholders and advisory bodies contribute insight to R^2Ed. She described the four core programs that make up R^2Ed:

- The Research Operations Core assists with maintaining a consistent framework of research efforts by ensuring a systematic approach to all research.
- The Statistics and Methodology Core helps researchers take advantage of the breadth of methodologies to address questions and aims to create novel methodologies specific to rural research (e.g., valid approaches with small sample sizes).

- The Rural Education Leadership Institute facilitates two-way communication between rural communities and researchers.
- The Rural Outreach and Coordination Core focuses on building relationships among partners and stakeholders by creating mechanisms for communication and support and is responsible for disseminating research findings.

Dr. Sheridan explained that all of R^2Ed's efforts revolve around identifying the types of support that rural teachers have, need, or want to introduce new instruction techniques while also strengthening the context for student learning. The intersection of schools, families, and community underscores all the work.

The pilot version of TeacherSpeak, a national survey on professional development coordinated by R^2Ed, identified more similarities between rural and nonrural schools than expected in terms of the format, delivery, perceptions, and applications of professional development. The pilot survey found differences as well; for example, rural teachers take a more collaborative approach to professional development than nonrural teachers.

Another study, Project READERS, evaluated the impact of live, web-based coaching for teachers around reading, similar to TRI. Preliminary findings showed positive results in teacher knowledge and skill as well as students' achievements and skill development. Dr. Sheridan said R^2Ed uses similar methodology across to enable data analysis. The results of Project READERS will be published in the journal *School Psychology Review*, thereby enhancing dissemination of this effective, evidence-based approach.

The Coaching Science Inquiry in Rural Schools study (CSI) trains teachers in guided science inquiry and provides collaborative coaching delivered online. Nebraska pays a lot of attention to informal science education, and CSI fits well with such efforts underway in rural areas, said Dr. Sheridan. The preliminary study findings suggest the program improves teacher knowledge and self-efficacy and contributes to middle and high school student engagement and self-efficacy.

The Rural Teachers and Parents as Partners (TAPP) program (previously known as "conjoint behavioral consultation") evaluates how teachers and parents can partner to address behavioral concerns for rural students at risk in grades K through 3. Preliminary results showed significant improvements in students' engagement and behavior, teachers' use of effective strategies, parent engagement, and parents' problem-solving competence. The program also improved parent–teacher relationships.

Dr. Sheridan noted that the Statistics and Methodology Core has made significant contributions to the capacity to do research in rural areas. It has identified rural contextual variables that can be barriers or facilitators to

intervention effects. It has also provided mechanisms to support secondary analysis and supplemental studies.

In 2013, R^2Ed sponsored the Connect-Inform-Advance (CIA) conference on rural education research that brought together researchers, practitioners, and policymakers from across the country. The conference fostered dialogue on translating findings, promoted linkages, and identified future research directions. The conference proceedings are available online (http://r2ed.unl.edu/2013/index.php). The findings will be published in book format. The following themes emerged from the CIA conference:

- There is a need for authentic, multidirectional partnerships and collaborations among stakeholders (vertical and horizontal).
- Research and policy should account for the rural context beyond size and place, uncovering issues inherent in rural areas that affect the implementation and outcomes of education interventions.
- There is a need for greater understanding of means to strengthen the ecological influences on rural student learning and define and measure student outcomes broadly.
- Rigorous and unique research and dissemination methods are needed to increase participation in, access to, and sustainability of rural-relevant research.

In conclusion, Dr. Sheridan described various R^2Ed mechanisms for dissemination and outreach, including research digests, digital communication, and social network use.

Discussion

Andrea Beesley asked about the challenges and opportunities of real-time virtual coaching in a rural context. Dr. Vernon-Feagans responded that she and her colleagues have received additional funding to conduct a randomized trial and are now focusing on what makes a good coach in rural settings and teacher resistance or acceptance of the TRI approach. She noted that teachers in rural settings have less education but more experience than other teachers.

Dr. Vernon-Feagans emphasized that teachers are most influenced by the effect of coaching on their students' ability to read. That is, a struggling student's positive response to the intervention drives a teacher to learn more about the intervention and to increase her or his own knowledge.

Dr. Sheridan added that the coaching relationship is dynamic. In the rural context, teachers are isolated and have no access to content specialists. She and her colleagues are identifying the components of interactions that contribute to an effective coaching relationship. The coaching method leads to communities of practice, Dr. Sheridan continued. Rural teachers are collaborative by nature;

once they see the effects of an intervention, they create their own infrastructure to build capacity in their schools.

Hobart Harmon said communities of practice can be time-consuming, and he questioned whether rural teachers find them meaningful or useful. He noted that, because of lack of funding for teacher professional development, everyone will likely move to virtual training, so online coaching has tremendous potential.

Participants had differing views about student behavior in rural versus other settings, but most agreed that behavior issues become more problematic in the adolescent years. The lack of early intervention or prevention services in rural areas exacerbates the problem.

Returning to the coaching intervention, Katherine Pears asked about the next steps to expand the model. Dr. Sheridan said efforts are underway to expand the model throughout Nebraska through training. Even train-the-trainer approaches require continued online scaffolding, which the R^2Ed website provides, she added. She also hoped that teachers who took part in the intervention would begin to see themselves as part of a community of professionals seeking to advance best practices. At the CIA conference, teachers said they appreciated the opportunity to learn about data and wanted to know how to use it better. Involving teachers and administrators as partners enhances the notion of shared responsibility for good education practice, said Dr. Sheridan.

Luke Schaefer pointed out that teachers often have multiple roles (e.g., basketball coach, bus driver) and, thus, have little time to engage in research and partnerships. Dr. Sheridan agreed that partnership has to become infused into practice, not an additional layer of responsibility. She pointed out the need for a context—embedded in the fabric of teaching, administration, and family life—in which everyone works together to create meaningful questions and arrive at solutions.

Dr. Farmer said that how a school uses the coaching model affects its sustainability. Schools nationwide struggle to apply interventions and organizational frameworks within classrooms. In the TRI approach, consultants figure out how the teacher can use the resources on hand. Dr. Farmer called for developing a team of intervention specialists, at the state level or within a university, who can provide technical assistance, work with teachers, and collect data for assessment. To sustain successful interventions and partnerships, ongoing technical support is needed.

Jackie Lester asked how deeply the research and sevelopment (R&D) centers are involved with districts and at the administrative level to sustain programs. She said she has come to value teacher leadership. Teachers can help their districts consider how to use their funds to implement effective programs. Ms.

Lester said that in most cases, when researchers come in, the programs and findings never reach the district level.

Mr. Schaefer pointed out that companies that sell education curricula arrive in schools with a complete solution in hand. Dr. Harmon said school systems are not interested in researchers coming in and telling them how to use their money. He emphasized the importance of understanding school district financing issues.

Dr. Vernon-Feagans stressed that leadership matters. When a principal or superintendent is passionate about a program, teachers will implement it because they feel supported. She noted that researchers have failed to help in the area that schools need most—making the financial case for program implementation that resonates with leadership.

Dr. Sheridan said R^2Ed is working closely with the Nebraska Department of Education, especially around special education, as the state becomes more accountable for school results. The state cannot mandate that schools use specific programs, but it can identify programs that fit the state's strategic plans, such as Project READER and TAPP. Providing school systems with a list of options enables leaders to select what they think will work in their communities. Dr. Sheridan stressed that there are many kinds of partnerships and relationships; it is important to think about building relationships horizontally and vertically.

Challenges and Priorities

Participants were asked to give input on challenges and priorities in rural education around two framing questions about the existing IES approach and a more targeted approach.

- *To what extent are IES's current research grant programs (R&D centers, education and special education research grants, partnership grants) meeting the needs of rural education? Where are the gaps in IES funding opportunities?*
- *Given geographic and cultural differences across the United States, would it be beneficial to take a more targeted approach to rural education research efforts by focusing on schools in a particular region of the country (e.g., the rural Southeast) or a specific population (e.g., Native American students)?*

Regarding the existing model, Dr. Brock asked participants to think about the structure and organization of IES funding, particularly the use of R&D centers versus individual grant funding.

Participant responses are summarized and grouped under common themes listed below. (Commenters are identified by their initials in parentheses.)

Lessons Learned from the R&D Center Model

Advantages of R&D Centers

There was general support for the R&D Center model. Noted advantages of the R&D centers included:

- Provide infrastructure (SS);
- Allow investigators to leverage research, better disseminate knowledge, and achieve more outreach (SS);
- Offer an organized, systematic opportunity for broad, large-scale work (SS);
- Address rural challenges of sample size, data collection models, partnerships, capacity-building, sustainability, implementation, communities of practice, and dissemination (SS);
- Gather input from communities of stakeholders who identify pressing needs (TF);
- Support communication among researchers (SS); and
- Generate research questions and build knowledge base (TF).

Comparison of R&D Centers and Regional Education Laboratories (RELs)

The RELs, funded through the National Center for Education Evaluation and Regional Assistance (NCEE) at IES, all have rural components but are not organized around rural education research (SS). Rules governing the RELs do not always permit the kinds of research that would be most helpful to rural schools and districts (AB). The RELs used to have relationships with school districts that were willing to try innovations on the basis that the effort would yield some materials the districts could use (HH). As a result of No Child Left Behind, the RELs were transformed into mechanisms for producing research to populate the What Works Clearinghouse (HH).

Improving Communication and Dissemination of Research

Rural research findings should be communicated more broadly (HH). Regional dissemination is more cost-effective than any other approach (LS). Use technology to improve dissemination (LS). Emphasize the source of the findings so that readers see the relevance to their own communities; for example, use *rural* in publication titles (HH). Apply marketing principles to communicate better (e.g., demonstrate relevance, use culturally appropriate language) (LS). Present findings in a way that allows schools to implement the interventions; a marketing approach would help (LS). Hire communications professionals to communicate with schools and administrators in clear language, not academic rhetoric (LS). IES can play a larger role in translating research into practice (LVF).

Communication of findings to the public and stakeholders could be improved, for example:

- Publish findings in the lay press or use common communication methods in small towns (e.g., local newspaper, bulletin boards) (CX).
- Present findings in readable formats, using common language, so they are accessible to all (CX, LS).
- Communicate using language, dialects, and wording familiar to the community (CX).

Improving Program Implementation

The ultimate goal of research is to understand the mechanisms that result in student achievement, so more and better implementation efforts are needed (SS). Researchers need opportunities to market proven interventions to interested schools (e.g., University of Colorado's and Annie E. Casey Foundation's Blueprints for Healthy Youth Development) (LVF). IES funding should be more flexible to allow researchers to provide ongoing technical assistance to schools (TF). Technical assistance is hard work, and lots of university staff do not want to do it (HH). Funding is needed to help schools adapt programs to their own settings and implement them effectively (i.e., an intermediate step between Goal 3, Efficacy and Replication projects, and Goal 4, Effectiveness projects) (SS). Implementation is the logical outgrowth of dissemination (KP). Implementation should be part of study design (HH). Funding implementation would give the U.S. Department of Education an opportunity to influence the emerging science around implementation (KP). Understanding implementation is a research question; therefore, providing technical assistance to support implementation should fall within the IES mission (SS).

Improving R&D Centers

Increase the duration of funding; building relationships and creating networks takes a long time (SS, TF). Develop mechanisms for gathering superintendents, discussing their needs (e.g., program evaluation), and following up with research that meets those needs (as some of the RELs used to do) (LVF). Provide schools and districts with resources and information they can use (LS). Require R&D centers to secure matching funds from businesses to assist with communication, marketing, and outreach[2] (LS). Centers speak to rural needs but are necessarily located at universities in metropolitan areas. Satellite centers would narrow the distance between the researchers and practitioners, families, and communities. Physical proximity would enhance communication, sharing, and knowledge dissemination (CX). R&D centers drive the research agenda on the basis of capabilities; a satellite approach could ensure more attention to the diversity of

[2] Example of a commercial partnership: An oil company operating in North Dakota provided funding to improve education. Following a year of assessment, the Succeed 2020 program, focusing on college and career readiness, was introduced. It includes the A+ Framework for evaluating data, developing research questions, analyzing evidence, disseminating findings, and implementing interventions (LS).

needs. Satellites could provide more support to embed research into the context of rural education (HH).

Improving Rural Research

Researchers need incentives to study rural issues. Researchers have no incentive to provide support or technical assistance. Service is not counted toward tenure (HH). Researchers should better connect with the communities they serve and forge deeper relationships with practitioners and others (CX). By forging relationships in school districts, researchers can recognize which districts are open to trying new things (HH). Researchers should better understand diversity in the rural context (HH). Researchers should craft studies that speak to real concerns of rural education (HH). Researchers need to help schools and communities value research because data collection or other research tasks not directly focused on a practical problem may be seen as a burden in a limited capacity environment (HH). Efforts should be made to (a) identify the next generation of school leaders who will use data to improve education and (b) support leadership development (HH). Funded proposals focus on interventions and data collection but rarely address issues such as parent engagement, school leadership, school financing, policies, or professional development (CX).

Potential Utility of a Targeted Approach

Approaches to Targeted Research

The scope of effort should be considered. Rural areas need assistance with retraining the adult workforce, for example. We must impact families in order to impact children (TF). Drill down to understand successful leadership practices in rural communities with high rates of poverty. Learn from specific contexts (LS, DW). Researchers must consider context to facilitate successful implementation of programs (AB, HH). Target topics of interest, such as the challenging and changing realities that rural families face (SS). The R&D center-plus-satellites approach would allow researchers to dig into unique variations in different rural regions (SS).

Improving the Quality of Research

Researchers are encouraged to narrow the focus of their efforts but are then criticized for it (HH). Researchers need more flexibility to create meaningful partnerships, so they can anticipate whether an intervention can be implemented successfully (HH). The goals of research should be clearly defined in advance. Communities do not need more research to define their problems; research efforts should integrate effective interventions in communities where those interventions are likely to succeed (HH).

Understanding Political Context

The needs of individual communities are vastly different. Native Americans and Alaska Natives, for example, are not monolithic. Poor Whites in Appalachia face different challenges than poor Blacks in Mississippi. Individual communities each have their own leaders, politics, family networks, and history (CX, HH). To improve opportunities, success, and equity in rural areas, a targeted approach should consider both place and race. Interventions must take into account the combination of social and political factors that influence a place (e.g., discrimination, oppression, poverty) to make a difference (DW). Understanding place requires authentic partnerships to understand community needs and concerns, but researchers have little incentive to do the kind of research needed to benefit the community (DW). Incorporate what is known about racial and geographic diversity into context-specific research (HH). An approach that focuses too much on geographic targets will inhibit discovery of contextual differences across populations and communities (SS).

Synthesis and Next Steps

Dr. Doolittle reminded participants that current funding opportunities and the mission of IES focus on research. Virtually all the supported research is initiated by the field in response to broad RFAs. She asked participants to identify their top priorities.

Given the day's discussion, what should the priority areas be for rural education research? What might be the most effective funding mechanisms? In an environment in which research funding is limited, how can IES target its resources to do the most good for rural education research?

Participants responded with a wide range of areas of need and interest. Their responses are summarized and grouped under common themes listed alphabetically below. (Commenters are identified by their initials in parentheses.)

Alternative Research Approaches

There should be opportunities to test small projects quickly, working with small samples (especially in rural areas) (AB). Instead of focusing exclusively on randomized controlled trials, review panels should consider alternative experimental designs better suited to rural areas with unique attributes and few students. There is already sufficient research to identify those students who would benefit from intervention, thus alleviating the need for controlled trials (TF).[3] Researchers need more methodological options. Single case design

[3] With recent advances in person-oriented analyses and developmental science, it is possible to identify youth who are characterized by distinct configurations or patterns of variables or risk factors. It is also possible to identify expected developmental trajectories and outcomes associated with specific

studies can be rigorous and are feasible. Special education research offers lots of examples of effective alternative research approaches. NCSER probably has great models that could be translated to rural communities (SS).

Demonstrating the Value of Research

Practitioners place little value on research when it comes to solving everyday problems (yet buy in to commercial solutions) (HH). More research is needed that ties public school value to workforce development (HH). Any rural research program should be validated and guided by what rural communities want for their children (CX). How can we effectively market the lessons learned from research so that stakeholders want the resulting products or services (CX)? When researchers develop useful information (e.g., guidebooks, action plans), school systems can use those to further their own efforts. Research findings have to go beyond journal articles (LS).

Implementation of Programs

Small, rural schools do not have the capability to apply research findings until they are presented in a practical way. More practice guidelines would allow others to try out interventions (LS). Many IES-funded interventions work well but are put in place by experienced researchers or hired students, and that approach is not sustainable. Programs must demonstrate that they are sustainable and cost-effective. Programs should be developed so that a new school system could adopt it with some training (LVF). How do you balance the desire to make a program user-friendly and accessible with the need for flexibility and sustainability? For rural education, how do you get the program into someone's hands, make it useful, and make sure it is reliable over time (KP)? Fidelity of implementation comes down to capacity-building (HH). Translation and implementation should be seen as a scientific endeavor that accounts for variations in context (SS). Studying processes, not just programs, reveals individual variations that would be illuminating for rural communities and especially good for students with special need (SS). Evaluation should demonstrate how change-oriented, innovative communities use research (HH). Consider the future of technology in rural school systems. Distance learning may be a viable and preferable option for some students (HH, LVF). Are curricula and instruction aligned with place-based needs and the distinct characteristics of rural communities (CX)? How do we reduce obesity, depression, violence, and other factors that undermine the health of youth in rural schools? How can we promote health and vitality (CX)?

Multisite Research Model

configurations. Prodigal analyses can be used to examine deviations from expected pathways in relation to interventions of interest and their impact on previously identified mechanisms of change. In other words, does the intervention result in the positive realignment of the developmental trajectories of youth with specific patterns of risks? (TF)

Multisite research efforts could address the goal of targeting research. Sites could address different geographic targets and different groups (KP). A multisite or R&D center-plus-satellites model could be very efficient. The main hub could create protocols and provide some standardization. Satellites could assess how an intervention works differently in different settings (SS). The multisite approach offers opportunities to study the diversity of rural communities (LVF).

New Funding Approaches

Researchers would value the opportunity to continue current research with an exploration focus, followed by another level with an implementation focus and yet another with a sustainability focus (JL). R&D centers allow IES to dedicate a fixed amount of funding to rural areas and maintain that focus. However, the rural research community could benefit from a mechanism that provides more funding in various amounts more frequently to improve distribution of research dollars (AB). Some funding preference should be given to proposals that aim to revitalize public schools and position them as a public good (HH).

Opportunities for Exploration, Experimentation

Researchers must listen to their partners and be willing to adapt their programs or approaches in response (KP). The IES practitioner-researcher partnership is a short-term mechanism that promotes some experimentation and adaptation, similar to the National Institutes of Mental Health's (NIMH's) "Fast Fail" core[4] (KP). Researchers who are not affiliated with R&D centers may not have the long-term relationships they need to experiment. Researchers need to be more deeply connected with rural schools so that the schools are willing to try new things (KP). Researchers need more flexibility to explore (JL). Exploratory approaches can raise sensitivities; some policymakers are unwilling to experiment with new ideas (e.g., a 4-day school week) (HH).

Partnerships

Partnerships are good mechanisms for achieving the goals raised today. Funding opportunities force applicants to articulate how they will build relationships (KP). Researchers need to get closer to the issues on the ground and the solutions (DW). Teacher and administrator training programs should address rural schools. Are there schools with a good track record of devoting time and resources to rural schools or whose graduates frequently teach in rural schools (CX)? When practitioners work closely with researchers and understand the interventions, they can implement what works on their own, without waiting for the published findings (JL). Partnerships and collaboration, leadership, and innovation all feed into capacity-building (HH). IES should find a way to encourage researchers to collaborate with business (LS).

[4] http://www.nimh.nih.gov/research-priorities/research-initiatives/fast-fast-fail-trials.shtml

RFA and Review Process

Review panels should include individuals with a rural research focus to ensure their perspectives are represented (AB). RFAs should clarify that research should seek to determine what works for whom and in what context (AB). Reviewers should understand that good rural interventions do not just address "problem students" but also others with unmet needs (TF). RFAs should require some diversity of sites or populations, and sites should have to partner with a school system (demonstrating that they have a relationship with a school system) (LVF). Grantees should also be required to include in their proposals how they will disseminate findings on effective interventions to rural communities (LVF).

Understanding and Improving the Rural Research Enterprise

Reevaluate the purpose of rural education research. Lots of rural communities have figured out what works for them and have strategies for engagement, connecting to community issues, and revitalizing communities (DW). Build a cadre of rural education researchers in various places (HH). Incentivize rural education research and support a new generation of researchers (DW). Take advantage of the mountains of data available in existing databases (NCES, NIH, the Census Bureau, the U.S. Department of Agriculture, etc.). Mine those data and exhaust those resources before spending time designing and testing new evaluations (CX). Identify the most effective funding mechanisms. Rigorously reviewed research is important but should be combined with other concepts, such as creating a business plan for implementation and sustainability (CX). Fund more research on place-based learning. In some cases, research is needed to reassure schools that they are on the right track (DW). Mechanisms are needed to validate and disseminate research (DW). Determine why change does not happen when an effective approach is available—whether because of lack of resources or knowledge or will (DW).

Special Education in Rural Schools

Identify special education needs distinct to rural communities and determine how to address them. Rural schools struggle even more than other schools to meet the needs of special education students (TF). Special education teachers in rural areas are isolated from their peers and feel overburdened. Persistence in the field—for all teachers but especially for special education teachers—depends on access to peer support and professional development (TF). Rural schools have no mechanisms to address special education needs beyond medications (HH). More school systems are mainstreaming all of their special education students, so there are fewer special education teachers in rural schools (LVF). Rural charter schools will be challenged to manage special education students; their response so far has been to send them back to public schools. Rural charter schools have even less capacity and will to address special education than other schools (DW).

Wrap-Up and Final Thoughts

Dr. Brock thanked the participants for their time and valuable contributions. Among the key points from the discussion, he noted the issue of diversity within communities and the need for more emphasis on implementation, applicability, and sustainability. Dr. Brock asked participants to be patient. Although a limited budget prevents IES from addressing all the important topics immediately, he believed that many of the issues raised would be reflected in research funding over the coming years. He hoped to continue the dialogue around rural education research.

Dr. McLaughlin applauded the participants for their passion and for sharing their insights. She appreciated their attention to special education needs in rural areas, and she hoped more special education research would be funded in the future.

The meeting adjourned at approximately 4:15 p.m.