



Including Rural Schools in Randomized Controlled Trials

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Why conduct rigorous research in rural schools?

In recent years, educators have been increasingly called upon to use high quality, rigorous research to make decisions about what instructional approaches should or should not be used in schools. However, most research that guides these decisions is conducted in urban and suburban settings.

Although 25% of the nation's students are served by rural schools (U.S. Department of Education, 2011), rural schools are underrepresented in educational research (Arnold, Newman, Gaddy, & Dean, 2005). This is particularly true in high-quality experimental or quasi-experimental research designs. A review of ERIC and PsycINFO databases from 1991 through 2003 concluded that, of those studies conducted in rural areas, only 21% included some sort of comparison group, just 2% were rated as "higher quality research," and none were randomized controlled trials (Arnold, Newman, Gaddy, & Dean, 2005).

We know that programs and interventions can play out differently in different settings, with different types of students. Rural schools present many unique characteristics that can affect implementation of educational initiatives. These include multi-grade classrooms, small enrollments, reduced access to professional development and support service opportunities, greater difficulty recruiting and retaining highly qualified staff, geographic isolation, tight-knit communities, and a strong ethos of local control. Therefore, if most rigorous research is conducted in urban and suburban settings, can the findings be directly applied to what works in rural settings?

What was this study about and how did it include rural schools?

This federally funded study examined the efficacy of Project GLAD (Guided Language Acquisition Design) through a randomized controlled trial in 30 Idaho schools (IES grant #R305A100583). Project GLAD is a K-12 instructional model designed to build academic English and grade-level content for students at varying levels of English language proficiency (Brechtel, 2001). Although it is widely used, particularly on the west coast, there had been no rigorous evaluation of its efficacy prior to this study.

Idaho is a sparsely populated state in which 46% of schools are classified as rural (NCES, 2011). Mirroring this, 47% of our sample schools were classified as rural, and they were evenly distributed between the treatment and control schools.

Idaho also has a growing English learner (EL) population: In the decade leading up to 2007-2008, it increased by 42% (OELA, 2010), with much of this expansion occurring in agricultural areas.

We randomly assigned 30 schools to treatment or control conditions. Fifth-grade teachers in 42 treatment classrooms received Project GLAD training over two years; fifth-grade teachers in 50 classrooms served as the control condition. Implementation was measured via classroom observations, monthly treatment surveys, an annual control survey, and teacher interviews. Student outcomes were measured using the Gates-MacGinitie vocabulary and comprehension assessments, a 6+1 Trait® Writing prompt, and an end of unit science assessment.

What are the benefits of conducting RCTs in rural schools?

We found that it was possible to recruit a sample that reflected the proportion of rural schools in the state. We did this by creating a recruitment approach based on input from advisors, colleagues, the state department of education, and a literature review. This approach was designed to show an understanding of the local context, establish personal connections, and offer high-quality professional development that was aligned with regional needs.

We further found that there were benefits to working with rural schools that we had not anticipated. First, teaching staff had no prior exposure to the intervention and little prior exposure to similar interventions. Similarly, there were fewer initiatives competing for rural educators' attention, perhaps because of their geographic isolation. Teachers had substantial interest in the professional development that we offered, which addressed the needs of their growing EL population. In turn, during the two years of the RCT, we had low levels of attrition, losing only one school due to teacher turnover and a handful of teachers to moves, retirement, or grade level changes.

What are the considerations for conducting RCTs in rural schools?

A key consideration of working with rural sites was the time and expense of recruiting in rural areas. Overall, recruitment of 30 schools took roughly 0.75 FTE of researcher staff time over an 11-month period, including eight trips. Much of this cost is due to the importance we placed on relationship building to increase buy-in, understanding, and reducing attrition down the road, particularly among rural schools staff who were not accustomed to being part of a research study. For these reasons, we first developed relationships with district and building administrators and subsequently visited every participating school in person to give a one-hour presentation to their fifth-grade teacher team about the study and the intervention.

Another important consideration is sample size and power. Rural areas have fewer schools, which translates into smaller eligibility pools. Therefore, recruitment either has to be highly successful or at risk of under-powering the study. We were able to secure 30 sites from a pool of roughly 80 that met our inclusion criteria. However, studies that require larger samples of schools or propose an intervention that is not as highly desirable might not be as successful, making it necessary for investigators to consider crossing state lines in order to meet their sample size needs.

Finally, we found that support from the state department of education was critical for many reasons. By facilitating relationships and contacts, the state staff helped us reach out to districts that are small and geographically dispersed. The state also served as an important centralized source of data (for state assessments, demographics, etc.), which was a more efficient way to obtain data than going through each district.

What does this mean for the future?

It is imperative that future studies continue to include this important segment of our nation's schools. Not including the perspective of rural schools in the research base of what works in education may translate into the inappropriate application of interventions that are successful in other settings to rural settings, in which they are less effective or require modification.

If research focuses exclusively on urban and suburban settings, it runs the risk of not being feasible in rural settings and, therefore, not implemented. It may also alienate rural educators from the idea that their practices should be research-based, as that research does not include their context.

Moving forward, it is important for funders to know that planning years are important for many reasons, including taking the time to recruit an appropriate sample. Allowing this time and budget for recruitment means that researchers are not limited to the “easy picks” (typically, large suburban and urban districts that are easily accessible).

As researchers, we need to continue to advocate for the inclusion of rural schools and design studies that do so. We also should be cognizant of aligning the intervention being studied with regional needs and priorities. On a more detailed level, we can share information with each other about the costs of rural recruitment, travel for onsite data collection, and innovations in distance data collection, so that others know how to plan for the inclusion of rural schools. Finally, we should be good stewards of relationships with rural educators, so they feel good about being part of—and using—research.

References

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