Webinar Transcript

Studying Educational Effectiveness in Rural Settings

MARY PIONTEK:
Good morning, everyone. Welcome to the Studying Educational Effectiveness in Rural Settings webinar. REL Central at Marzano Research will be your webinar host today. We serve the educational region that covers Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming.

I'm going to take just a few seconds to explain the webinar platform structure, so that you'll be able to use both the closed captioning aspect and a Q&A panel.

As you will note, this webinar is being live-captioned. If you need to access the live captioning, the aspect of the chat panel, which is a window that will open, provides a link to the caption. Go to that link, click on, and you should be automatically entered into the live-captioning software. Once the webinar has begun, the live captioning will happen. This will continue throughout the webinar and close at the end. If you have any questions or concerns about the live captioning, please feel free to post a question, either in the chat room or in the Q&A box. The Q&A panel, we'll mute all participants. But we'll be using this panel to ask folks to communicate at different places and spaces throughout the webinar. I will post questions or ask folks to share their experiences during certain parts of the webinar. And we'll ask folks to please answer that in this chat panel. Again, if you have any questions or concerns or are unable to access the Q&A panel, please post questions in the chat panel or vice versa. We'll be monitoring both throughout the webinar.

I'd like to introduce our wonderful presenters for today's webinar. They are from the National Center for Research on Rural Education at the University of Nebraska-Lincoln, Susan Sheridan, Professor and Director and James Bovaird, Associate Professor and Director of two different centers within the University of Nebraska-Lincoln. We've included their email addresses in this slide if you want to reach out to them after the webinar. We know that they're very happy to answer questions or share more information about the center and their different work.

We also want to point out that this webinar is based on a fabulous publication that was written by our presenters and their colleagues at the National Center. We will also post a link to that report in the webinar chat. So if you wish to follow along in that document as we go throughout the webinar, but it's also a fabulous publicly available resource that you can download and access at any time. It's available through their website and also the link that we provided. I'd like to now turn the webinar over to our two presenters, Susan and Jim. They'll start out by talking a little bit about the National Center for Research on Rural Education, will talk a little bit about the goals and purposes of the webinar, and then will begin the webinars itself. Thank you, Jim. Thank you, Susan.

JAMES BOVAIRD:

Hi. Thank you very much. Hi. My name is Jim Bovaird. I'm an Associate Professor in Educational Psychology at University of Nebraska-Lincoln and also the Director of our Nebraska Academy for Methodology, Analytics, and Psychometrics, which is part of the Nebraska Center for Research on Children, Youth, Families and Schools. Susan was our PI on the National Center for Research on Rural Education—she'll be speaking here in a little bit. I was a co-PI on the grant funded by the US Department of Education, Institute of Education Sciences. This grant was housed within our center here at UNL, and has obviously provided the majority of the funding for our rural research work over the last half decade or so.

Go to the next.

The long-term goals of the center are twofold. One is to improve rural students' academic and social-behavioral skills by identifying strategies that lead to evidence-based practices in rural settings. And then two, to establish that infrastructure for conducting—disseminating such relevant research to you, the practitioners of the rural research field as a whole.

Throughout the rest of the webinar, we are going to cover four areas that you can see on the screen. We're going to talk about study design, recruitment, participants, supporting and monitoring implementation, as well as data collection. I'm going to tackle the first topic, study design, as well as the fourth, data collection, and Susan will be stepping in to talk about sections two and three.

All right, so factor one, planning an effectiveness study. I'm a methodologist by training, and so, this is one of my key areas here. And I expect, to an extent, I'm preaching to the choir here in that a number of you—if not all of you, have already conducted research in rural settings, or at least are sophisticated consumers of such work. But I'll start off by pointing out and just reminding that research is research and statistics are statistics, regardless of the context—whether it's a rural setting or an urban setting. And the fundamental piece to any research enterprise is the set of research questions that drive those endeavors. The questions really are paramount. While the whole process of research really doesn't vary between rural or urban settings, the types of questions that are asked can differ quite a bit between the two contexts. Not necessarily in importance, but in the content that the questions are addressing. Ultimately, that research question leads to any of the decisions that we should make in terms of our experimental design.

Since we're talking about planning and effectiveness study, and conducting, and individually analyzing effectiveness studies, we are talking about a context that is more quantitative rather than qualitative. And so the requisite designs as supported by the Institute of Educational Sciences (IES) are randomized control trials, the RCT, or strong quasi-experimental designs such as regression-discontinuity design. Our goal here in asking an effectiveness research question, designing a study to test such a question, is to ideally determine causality. Does this intervention or this program, this practice, lead to better results? When that's not possible, our alternative is to look at the quasi designs. We're looking for well-controlled studies in terms of controlling the internal validity of our inferences. The RCT is obviously preferred in terms of establishing causality. In RCT we're establishing two or more groups through random assignment. If random assignment is effective and

properly done, these two groups should be equivalent, at least statistically speaking. And if done well, RCT should give us pre-state and the inference that we make from that.

Now we're always cautioned that there are other conditions that may lead to explanations of any group differences besides the assigning condition. But those tend to be averaged out by the random assignment and small sample cases. Obviously, we are going to consider co-variates. Quasi-experiments then are done when those randomized control trials are not feasible, but we should not have the same confidence in the results of those, as we would in an RCT because there are those other explanations that aren't controlled, primarily related to the natural assignment to condition, versus random assignment. So there's more work that has to be done in terms of controlling those well-known threats to internal validity. And this is accomplished by both design features and statistical controls. At the end of the day, we acknowledge limitations of such quasi-experiments. And we use that evidence we are able to gain through a quasi-experimental design to build our knowledge base.

Again, research is research, regardless of context. And so some context, which includes the rural context, create different challenges than others. These challenges are often attributed to the distance between population entities, the density or lack thereof of the population in the rural context, and the costs and logistical limitations that are associated with getting access to those widespread resources. But the context is important, especially in the rural setting, especially the local context. And so we do encourage a mixed methods approach to measuring and incorporating that context, whether that's through the various rural definitions that are available, or whether they're through a true mixed methods type design that would allow us to incorporate more qualitative information into the RCT or the qualitative context.

Our center has done quite a bit of work on measuring rurality and continues to do so. So please look for our work in the future.

In terms of statistics, it's always the unit assignment that's important, not always the number of students. So a reminder that the group level that is assigned to a condition determines the complexity of the design and the research question that's driving it. When schools are units of assignments, then we are encouraged to look at matching and stratification, trying to select a homogeneous sample when possible, and to consider alternative designs within the RCT context, such as crossover designs where participants receive both conditions, or step-wedge and weightless control type designs where participants serve as their own controls. Now when classrooms or teachers are units of assignment instead of the schools, then we can look for a little bit of creativity within the school setting in terms of assigning different grades to conditions. If we are going to assign classrooms to conditions, you always have to be aware of the possibility of contamination, the so-called teachers' lounge effect. And we might also recommend considering alternatives, such as single case or small end designs. I encourage you to look at the What Works Clearinghouse (WWC) guidelines for some guidance there when assigning classroom or school as the assignment unit.

I also encourage you to consider things such as planned missing data designs, so-called efficient measurement approaches, whether these are cohort sequential, or accelerated designs in longitudinal settings, adaptive interventions, the so-called smart designs that are becoming very popular' adaptive testing such as computerized adaptive testing which is used in most major testing platforms nowadays, or sequentially designed experiments which allow for various decision points. All of these planned missing data type designs can lead to a lower burden in terms of the data necessary to address the research questions. And also the well-supported regression-discontinuity design that's another one that really doesn't get enough press in terms of its causal inference and its control to address the validity. So with that, I'll leave my lecture here, so to speak, and turn it over to the panel.

MARY PIONTEK:
Thank you, Jim. We would love to hear from folks if they've had a successful research experience using any of these kind of designs, whether it's RCT or quasi-experimental design, or if they ran a project that used mixed methods they found particularly helpful. You as practitioners experience these researchers' experiences and methods in very different ways than we as researchers. So if there were projects you've been involved on that looked at different aspects of rurality, as Jim mentioned, that had sort of longitudinal design that looked at particular kinds of strategies in classrooms, or across schools, or across the district. We just like for folks to populate either in the Q&A box or in the chat room any kind of experiences you've had that were successful. What were the aspects of that? Was it about the research design? Was it about the ability to use different kinds of data? What was a successful experience you had? We'll give folks a few minutes and then I'll highlight a couple, and then we'll move on to the second factor.

Thank you, everyone. A couple examples that have come up is a project that actually somebody talked about, college and career readiness. And they said that was a longitudinal study that looked at different aspects of dual enrollment and dual credit that were used in a couple rural settings. They said, one important piece of that was the fact it was longitudinal so that they could look at different cohorts of students over time, but also in the sense that the researchers and the practitioners worked together with the community colleges and the other areas of education to really develop that partnership and to commit to looking at information long term. So that was one that used both mixed method, but also had a longitudinal aspect.

Another group talked about an early-reading Intervention project that used classrooms as the data point. It was a quasi-experimental design. This one was mostly quasi-experimental both for feasibility and cost, but also that was also a traditional research technique that the district was familiar with and they were probably happier to participate in, than some of the more happy to participate in, than some of the more robust designs.

Thank you, everybody, for sharing. We'll now go on to the factor number two. And I will hand the webinar back to Jim and Susan. Thank you, everyone.

SUSAN SHERIDAN:
Thank you, Mary. I'm Sue Sheridan. And I'm happy to be here with you all today as well. I'll be talking about the next factor in conducting rural research, which is an issue around recruitment. Now as all of you know, as much as we know that a reality of rural schools is their small size, their dispersion geographically across sometimes many, many, many miles. And the fact that rural communities tend to be quite tight-knit. All of these things, actually, we think are strengths communities. But they do present some challenges to researchers who are trying to conduct research, especially rigorous research, and large-scale research, the kind that Jim talked about primarily that is required for determining the efficacy of interventions that are happening in rural schools.

I'll mention a couple challenges associated with these realities. As I mentioned, rural communities tend to be very close-knit. They tend to be generally stable. They are often quite homogeneous. And because everyone knows everyone else, there's sometimes a fear of stigma if the research that is being conducted involves some psychological or educational assessments or taps some personal issues like family history or mental health issues. This is complicated by the fact that researchers tend to be unknown entities. So the community is very tight-knit and very close, but the researchers coming in are external to that community. And so there could be some distrust or skepticism about whether or not we're really going to be able to protect the privacy and confidentiality of folks in the study. Related to this is the fact that rural schools often don't participate in research. They're not as accustomed to participating in research, as say, in some urban areas where so much of our educational research is conducted.

So there's not a lot of information among stakeholders at the rural level about what's involved and how research actually is quite different in some cases from standard practice. So this could create a real big surprise for administrators and educators or family members who are asked to participate in things like being randomly assigned to a treatment group or a control group, or to systematically implement research procedures in a certain way with fidelity, or using standardized intervention protocols or data collection methods that are a little bit foreign to what is typical in rural classrooms. Now on the one hand, these are aspects of high-quality research designs, but admittedly they are atypical in many rural settings.

The logistical challenges are probably the biggest concern that people think about when they think about doing research in rural schools. Low enrollment is one logistical issue. I mean in some places, classrooms can be as few as 10 students, with far fewer than 100 students or so per school. And because both rural schools and classrooms are typically pretty low in enrollment, it's sometimes necessary for researchers to recruit participants from many schools in many districts dispersed over very large geographic areas. And this obviously will introduce barriers associated with cost, both in terms of time and financial resources. And by just increasing the number of districts and the number of different schools with different counties and regions that might begin to populate our research, we're going to start seeing some differences on some key demographic areas. And so this can complicate some of the research designs that we are using. If you're in need of a specific type of population, say, children with a particular disability or from a particular ethnic group, access can be

a problem. And it can result in a plateau effect such that just by increasing the number of schools or classrooms, that that might result in only a very small number of students still being eligible.

And one more logistical issue that you might think about this is the sheer numbers of roles that each person in a rural school will play. As a researcher, we don't necessarily think about that. You all know that in your daily work, but it is the case that administrators and teachers and all the stakeholders in a rural school and community will wear many hats; who all assume duties outside of the classroom. For example, such as coaching teams, or advising extracurricular activities or supporting clubs, or doing a lot of things that need to be done and there's just not a lot of other human capital available for. So although these are positive aspects at times around the sense that rural educators will do whatever it takes to make the school run very effectively, it does decrease educators' abilities to dedicate time to research participation. So, we have to be very sensitive to those kinds of things. The reality is, is that our recruitment will take more time. It will take more effort. It will take more resources. It will really take more collaboration than what we might be accustomed to or what we might realize.

For researchers and rural school practitioners then who want to participate in research, and there are many people in rural schools who really want to engage in this kind of work because it is providing an opportunity to have a voice and to represent all of the strengths and realities and opportunities present in rural schools. It will though, take some creativity and some flexibility—a real opportunity to come together and do what it takes. And fortunately so many rural educators have that attitude that they'll do what it takes to help further the good for all of education and for students, particularly in those types of schools.

Some of the solutions or strategies that we might talk about—first, entering this work, just knowing that it's going to be costly. It will require more funds or at least more resources to do this kind of work than when you're in a larger school district that's more flush with human and sometimes material resources. It will require us to think more creatively in rural settings.

Sometimes we'll see schools where they'll actually write job descriptions to support external efforts around research or program development. We always dedicate, on our side, on the research team, we dedicate percentages of some of our staff, some of their time to providing recruitment support and being specialists when it comes to recruitment.

We hire people who have very good people skills, who are well-organized, who are flexible, who are able to go out and spend time in the rural schools, and really get to know the community, and the individuals in the buildings, and learn about what's important to them, what's realistic for them, and how we might be able to join forces and work together to create a good research project.

Technology can be an asset when recruiting in rural schools. But before I say anything more about that, I will just caution us to remember that technology is not a silver bullet. It's not a panacea. It does not take the place of the human touch. And relationships, conversations, time spent together in the school are all really, really important to not only educators, but to researchers—or at least

researchers who really want to understand how education in rural settings really does their business.

So it is really important for intervention research, where we're aimed at improving some practices or building school capacity, to have the opportunity to get to know one another. Because by rolling up our sleeves and working together that's how we'll actually see some real positive change taking place. But really any type of research that we're doing will always be best when it's done in a partnership mentality.

Getting in the door is always easier when we have these personal connections. So we try to do face-to-face meetings first, and then follow up with technology, like this platform, Zoom, or WebEx, or conference calls, or any other kinds of technology that we might need to answer questions on logistics, but only after we really spend some time on the front end getting to know one another and build trust.

We do have to keep in mind that not all rural schools across the country have high-speed internet. If we're working with families, which our center does a lot of, not all families are going to have access to Wi-Fi. A cell service might be better, but not always. And so we just need to always keep an open mind in terms of the ways that we might be able to reach out and communicate.

One thing that we have found in our work with practitioners in rural schools is that having some school district liaisons or champions, you might think of them as, is a real useful way to connect and build relationships. Depending on the study that we're doing, we sometimes recruit someone from within the district to serve as a liaison between our study and the educators who are on the ground, so to speak.

Because this person really does know the ins and outs of the school building. If they're carefully selected, and we really work with our partners and our administrators to identify who would really be the right person to serve in this role, somebody who is trusted and reliable, somebody who is legitimate, somebody who has credibility among educators on the ground and families in the community, or depending on whom it is that we're trying to recruit. That can be really helpful for both sides because it could be a sounding board for us, as researchers to learn about the best way to really demonstrate our commitment to working together. But it's also helpful for people in the school who have questions about this study, or the researchers, or the procedures, and things like that. And so this liaison serves as a really nice bridge.

If that's not possible then sometimes we'll situate somebody from the research team in a school building, especially for our high profile events like family school conference nights, for other school events, teacher planning time, the few weeks before school begins when teachers have more flexibility and we can talk, and we can explore idea, and we can really figure out the best ways to work together. Because that personal connection again is another way to increase the types of collaborations that are necessary for really effective recruitment to take place. So with that, we'll turn it over to Q&A.

MARY PIONTEK:
Thank you, Susan. Again, I invite folks to share either a success or a challenge they've faced in terms of recruitment or even being recruited to participate in a research project—logistical, being overwhelmed by too many things on your plate, staffing issues, access to different resources. Please share a success or a challenge. I'll give everybody a couple of minutes here, and then I'll share a few. Thank you, everyone.

Thank you, everyone. Claire, thank you for sharing. She suggests a project that involved using existing relationships with different regional education associations. That way that you already have access to different schools, access to different folks that you've worked with before.

Rachel also shared one. Thank you, my dear. A real problem that she identified was having chronic student absenteeism, which of course really affects data collection. It's really difficult to have consistent information, but also usable information, especially when we think of something we're doing longitudinal studies or something like that. Thank you, ladies, for sharing. We really appreciate it. We'll go move on to the next factor, which is factor three. And we'll pass it back over to Jim and Susan. Thank you, everyone.

SUSAN SHERIDAN:
Thank you. Thank you, Mary. And thank you for the folks who are participating. The questions are really excellent questions and some that we absolutely do deal with, both in terms of trying to figure out site by site who that best contact is, if it's somebody in NESU, which is what they're called here at Nebraska, an REA, or somebody at the building level. And certainly issues of absenteeism are really germane in many different types of school settings, not just rural.

The next thing we'll be talking about is supporting and monitoring implementation in rural areas. And this is particularly related to intervention research where we're implementing programs or strategies and testing the potential efficacy or the efficacy of the intervention. These do require some large samples, typically, and they require a lot of attention to what it is that the practitioners are doing on the ground. And so there's obviously a real critical role for implementation fidelity in our intervention research. Ensuring that our programs or strategies are implemented with fidelity, so to speak, is really, really at the heart of being able to identify what works for whom, and under kinds of conditions. We don't have fidelity in our intervention work, then we really have no confidence at all in the final data that we're reporting on. So we really need to have some support for implementation fidelity. Especially if you want to communicate out to other educators about what does work in rural schools, and what kinds of professional development resources should be devoted to these strategies. Research teams like ours who are concerned in ensuring fidelity of program implementation are often located in places like the universities or training centers that are quite distal to rural school partners. Again, this issue of geographic dispersion or distance really wreaks havoc when our preferences are to be on site and to be working closely with practitioners who are parts of our studies. But this kind of distance really does make it difficult to do so. As many others, although we prefer on-site training and coaching support, we've figured out ways to try and address some of these challenges, some of these logistical challenges associated with distance. Complicating the challenge of distance though, is the fact that the rural schools that we work with

often don't have a lot of additional personnel, materials, or specialized expertise to provide some of the additional support—the ongoing support that is so important when we are learning new strategies.

So we again, have really tried to blend some of the training and ongoing supports with some technical support—some strategies related to web-based or virtual training that allow us to have more frequent, regular, and consistent connections with folks in the field. And be creative in how we're using those platforms. Although I said that technology is not a panacea, it is the case that it provides the opportunity to increase the access that we have with participants and that participants in the field have with us.

Again, I'll sound like a broken record. But I will say that the effectiveness of using technology whether it be web-based or other forms to support implementation and fidelity, does assume a good relationship, first and foremost. And so whatever we can do to build trust—to build a partnership, to build a type of mentoring and coaching relationship where there's freedom to try things, take risks, and learn how to best approach the work together, is one that's going to be most effective. There are many easily accessible and web-based training environments that allow schools and districts to participate in program implementation training. So we can really utilize different platforms to reach a lot of different schools or districts simultaneously. We also use websites to house training materials so participants in our studies can access instructional videos or podcasts, interactive presentations. We'll have some brief criterion-based quizzes, or reminders, or booster sessions available all online so that people can access them 24/7 from anywhere they might be located. We put together implementation forums, all of those checklists, lesson plans, and scripts. Everything is easily stored on project websites—so there are some static ways too that we can provide information. Whenever possible, we add to that static platform interactive opportunities through chat rooms and virtual teacher lounges and things like that. All of these are really helpful and useful means for providing access to information as much as possible.

And there are many other researchers who have very interesting and creative models available online that have coaching, live coaching using Bluetooth technology, or other kinds of web-based, media-based means for some live, or close to live types of feedback mechanisms. Now that type of training is really important for research where participants are responsible for implementing new practices.

But I will say that the kinds of communication that I talked about earlier, open communication between the research team and participants, is really important for all kinds of research. So if you're participating in a study, for example, that's collecting data on your students from preschool through early elementary years, it's still important that there is integrity in the data-collection process. So helping our teachers, or our administrators, or our family members; whomever it is that's participating understand how to complete the surveys, whether they be paper and pencil surveys or tablet-based surveys, or collecting video to do observations and sending some memory cards back through the mail, or downloading video onto a secure website. We have to help our folks together to figure out the best way that they can set up the equipment and capture good reliable data, and understand how the importance of the integrity of the data drives everything when it

comes to really answering the important research questions. Again, these are best done through partnerships and working together to figure out the best way to generate data that will be meaningful.

So let's talk about some methods or strategies for monitoring implementation because there are ways to set it up so that we can increase the potential for having good data, good interventions. But how do we know? How can we monitor it and have data that will really give us confidence that our studies are really reliable and valid? Well, we will emphasize in our research very careful, very systematic monitoring of our interventions. Without this, we just can't really make adjustments even to know if the implementation is being accurate and reliable. Because if it's not, we might be able to step in and do some things to help folks in their process.

We use fidelity checklists whenever possible. These are very easy and practical forms that, whenever possible, we co-create with our practice partners. Because they can then help us understand the easiest and most straightforward but reliable way of collecting those data. When we co-create the measure, we're ensured that our practitioners, that our partners, understand the implementation steps that they know what's expected and that they buy into it. And when the steps in an intervention are written down, we are all able then to monitor how it is that things are being implemented.

Many of our interventions will produce permanent products. And what I mean by this would be things like stickered charts, or home-school notes, or contracts that might be established between a student and teacher. Goals that are being set and charts that are being used to collect data on those goals are all permanent products that are really a nice and simple way to monitor fidelity. So if we collect those records, we will have some evidence that some of the intervention components are being completed. So we really do try to create permanent products for all of our interventions, and do so in a way where the different steps of implementing that intervention can be checked off, or marked, or at least initialed so that some of the elements will be recognized. Now that's not a perfect way to collect fidelity data because not everything will be subject to a permanent product. But when used with some other forums, we might have a multiple method approach to having data about implementation.

I alluded to the issue or the use of videos a couple of minutes ago. And I do think that that is becoming a much more acceptable way of collecting data in many, many schools. Obviously districts and schools will have their own policies and teachers will ultimately have the final say about whether they're willing to have some of their classroom practices, their students, and their classrooms monitored by video. But it is the case that society today is much more comfortable with cameras and videos than ever before. And they've become so practical and non-intrusive that it's really quite easy to go into a classroom and establish through some kind of smart technology, or GoPro cameras, or things like that; ways to capture what's happening in the classrooms and then send those videos back to the lab where we can do the coding and the deep analysis that's necessary. And they can be really, really helpful, they're also very helpful in coaching and supporting the fidelity work that we talked [AUDIO OUT]. That's happening more and more now in a

lot of educational research in real settings. So those are my thoughts about fidelity, and we'll turn it over to the panel.

MARY PIONTEK:
Thank you, Susan. Again, I want to invite folks to post a success or a challenge they've had around supporting or monitoring implementation. Again, it might be use of a different kind of checklist, a different kind of training, just-in-time coaching, different kinds of resources that people can access. Again, use of videos or recordings, anything like that, folks, please share.

Thank you, Caitlin. Caitlin noted that she's had some challenges with trying to do some kinds video observations. So Caitlin, I'm going to save your question to the end. I think we'll have a couple of minutes for Jim and Susan to give some different ideas and maybe some best advice that they've had as well. But that is definitely one, thinking about trying to do video observations and/or just sort of document audio and video communications can be a challenge.

Rebecca also offered that she's had a challenge using back-end data from different computerized tools in the classroom where students are either manipulating via computers or tablets, or different things like that where that's part of the data collection. And that can be both technologically challenging, but also creating those data repositories, and accessing that data can be a bit of a challenge.

Melissa noted that they've used the different Google Forms to enter data and that really allows real-time access to the program implementation of the data. Also the nice thing about using Google forms is that everybody can see the nature of the data. So we can have some consistency around that.

And then we've got another one here. Rachel had also talked about that they do different kinds of trainings every other month to make sure that folks are up to speed with sharing consistent information. That helps to not only create better buy-in, but keep buy-in going. And also it allows people to feel involved throughout.

And then again, Melissa gives a good time-honored one—that we experience every day when we try to send out surveys and links—it's that district emails often block information coming in through firewalls. And so you have to be both creative, but also work with districts to be able to have that kind of constant communication and challenges.

So we've got a couple questions I want to leave out there. We'll circle back to. But Claire posed a really good question is she sort of gave us a nice segue for factor four, which is talking about different strategies for collecting data, but especially around participant incentives. So we'll leave your question to the end, Claire, and we'll circle back to that. But thank you so much for posting that. That was a great segue to factor four.

JAMES BOVAIRD: Yes, so welcome back. This is Jim again. I'm going to talk here about this last set of topics.

So collecting outcome data, I started with a bit of an anecdote when in the first topic and I'll start it again. I'll just say, "technology, technology, technology, and partnerships, partnerships, partnerships."

While we have been talking about planning, and conducting, and monitoring, and collecting data on effectiveness studies. And as I said earlier, that it's largely a quantitative world. We do support strongly a multi-modal approach, whether it is a mixed methods or multiple perspectives kind of approach. Especially collecting outcome data, and the way that we go about collecting outcome data.

So as Sue has said a couple times now, technology isn't that magic wand or that all-in-one solution to all logistical problems. But technology sure is making things interesting for us in terms of our ability to collect data, and whether it is through utilizing distance, meeting or teaching technologies, such as Zoom or WebEx or Adobe Connect to conduct focus groups. Or utilizing smartphones indoor and/or text devices. As I'm old enough, I still want to call them pager studies. But the modern term of ecological momentary assessments, are very, very useful in terms of collecting real-time longitudinal and intensive data.

We are exploring the usage of those types of technologies quite a bit now within our center, as well as developing iPhone apps to enable us to do several progress monitoring fidelity type activities, as well as primary outcome data collection. We utilize tablets in terms of in-class data collection, trying to minimize the pencil and paper, as much as possible. Primarily because those tablets, or netbooks, or some other type of direct data collection cuts out a lot of data entry errors. It cuts out a lot of data transportation issues in terms of integrating that data back into our centralized database.

And as well as, obviously, the web-based data collections, in addition to platforms like Zoom, et cetera, utilizing things like SurveyMonkey or other brands of online survey instrumentation programs. Even considering online tests or measurements directly.

Now we've also—we were talking earlier—Sue was talking earlier about web-based classroom observations, having the camera in the room, utilizing those not just for fidelity assessment, but observation of direct student outcomes when appropriate and permitted obviously by the schools. So consider a multi-modal approach to data collection. And again, like fitting the research design to appropriately test the research question, choose your outcome methodology to fit the data that you really need to address your questions. And partnership, partnership, partnership.

Rural settings, as you all well know, are widely dispersed in most cases. And access to those are difficult. So we really strongly encourage partnering with local and regional staff, hiring local data collectors, working with a local data collection manager when possible and feasible. This also improves the commitment to the project, strengthens those partnerships, and probably most importantly provides on-the-ground knowledge of the context. That person who is present is able to help fill in the blanks, some of those absenteeism issues that were raised earlier, sometimes can be ameliorated by utilizing that on-the-ground data collection person. Then the problem obviously

is that those local staff are wearing multiple hats. And as one of the questions or comments said, "the number-one thing that they would like as an incentive is more time in the day or less responsibility." And here we'd be adding some responsibilities to them. So we have to get creative sometimes in terms of those incentives that we might be able to provide to them.

Obviously, we know that incentives increase since participation rates for the participants, that it increases the participation rates of the partners on the local grounds. Really, I don't know that we have a great answer in terms of the magic solution to any of this. We tend to, like most things that we do, consider a multi-modal approach to this; prepaid versus/or contingent incentives. We've done a lot. We've used digital incentives a lot lately, something that you can use online, maybe someone fun, Amazon or iPhone or Apple type credits, or more practically speaking give them something Walmart or a local grocery store if there are some types of credits there that can be given, something that makes their life easier. Even if you're adding time to them, is there something you can do to make life easier?

One of the other aspects that we've got good feedback on is when we do work with these local partners through data collection that there's some level of professional development and our training that's coupled with that participation. So again, even though they're giving us some of their most precious resource—that additional time, they're getting something back out of it. We're not just utilizing them for their man-hours.

The last thing that I'll talk about here before we pass onto the last question-and-answer session, is to again emphasize the idea of planning. And planning your data system ahead of time. We spend a lot of time planning our studies. And then a lot of times the resulting data system is an afterthought. I really encourage you to plan your data systems early and with the same vigor that you plan your overall design. And including looking at other sources of data might be able to address some of your questions.

Most states, all states have some degree of state longitudinal data systems. Some are more developed than others. Sometimes those data systems, they don't provide necessarily outcomes, but they can provide a lot of the surrounding information that we might use to better answer our questions, including looking at census data. Here in Nebraska, we've partnered with a couple neighboring states to create a regional data center supported by the US Census Bureau. And those census data centers come with then access to a plethora of regional and national data systems, so we can integrate with in terms of our local projects. And then just consider those plan missing data designs that I referred to earlier in the presentation. Like data is at a premium and observations are hard to come by, plan what you need and what you don't need—what you can do without. So thank you for your time. And we'll pass it back to the question-and-answer panel.

MARY PIONTEK:
Thank you, Jim. Again, we'd love folks to share any examples of successes or challenges they've had with either collecting data in rural areas or accessing information, other questions about incentives, anything folks would like to share. We'll take a minute or two. And then we have a few minutes

here at the end for other general questions you have of our panelists. So please feel free to post anything in the Q&A or in the chat box.

Thank you. Thank you, everyone. Again, some folks emphasized what Jim said about the different kinds of incentives. Sometimes that's a $30 gift card somewhere. Again, sometimes that's access to other kinds of online resources they might use in their classroom. Sometimes, as he said, it can be credits at online emporiums for different kind of resources, or something like that. And other folks mentioned again that, as they said, the partnership at a local level, hiring local staff, it might be retired teachers. It might be former classroom assistants to help with the data collection, to help manage that just-in-time on-site pieces.

Folks, any other questions? Please ask. Post in the Q&A or the chat room. Our panelists will be happy to talk about that. Caitlin did post an earlier question about video, the use of video.

SUSAN SHERIDAN:
Yeah, I will answer that question because it is really germane to getting high-quality data. We use video a lot and we have found the quality of the webcams, or even the technologies available through our notebooks and the iPads, and things like that, to be really, really good. So we do train our teachers in setting up the cameras. We will—sometimes—send somebody out and do some troubleshooting prior to the beginning of the study, and even do a couple trial runs before we actually do set up the cameras to actually collect real data. So that we are able to do some troubleshooting with them before the actual data collection sessions begin.

We are always available to answer questions online.

And I think being selective, the GoPro cameras work really well, but so do a lot of these other smaller smart technologies. So it really does depend on what works for you in your settings. Finding one place to set up a camera that will really capture quite a large scope. We can end that audio has been really good.

So I'm happy—and we are happy—both Jim and I are happy to follow up with any individuals who didn't have their questions answered. You have our email addresses. So please feel free to reach us and we'll be happy to continue the dialogue because it's such an important topic for research.

MARY PIONTEK:
Thank you, Jim and Susan. Once again, we really appreciate you taking your time and sharing your extensive experience and fabulous resources.

If you have any questions, concerns, or want access to email information about contacting Jim or Susan and more information about their center—Mary Piontek is me and my fabulous colleague is Kara. Our information—the contact information is there or you can also just reach out to us through Marzano Research or through REL Central.

Thank you, everyone, for participating. We really appreciate your time and effort and you're sharing of good ideas, advice, experiences. Thank you all again. Have a fabulous afternoon.

SUSAN SHERIDAN:
Thank you.

JAMES BOVAIRD:
Thank you.

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