

The SRI Homeroom - Episode 18

Narrator:

Welcome to the SRI Homeroom. Today, how can we get high quality products and programs to the schools and students who need them most?

Kerry Friedman:

Really thinking about who are the students or the teachers who are most impacted by a particular problem of practice that you're seeking to develop a solution for, and letting their lived experiences really drive the design. And when you do that, you often are able to create solutions that are more effective, not just for those most impacted, but for everyone.

Narrator:

We explore years of new research into the design and scale of education innovations today on the SRI Homeroom. Welcome in.

Adrienne Woods:

Hello and welcome to the SRI Homeroom. I'm your host, Adrienne Woods, and today, I'm thrilled to be joined by two of the nation's leading researchers in a relatively new and increasingly important line of work, which is how to design and scale high-quality educational innovations. First, we have Kerry Friedman, who's a principal education researcher with SRI. Hi, Kerry.

Kerry Friedman:

Hi, Adrienne. I'm glad to be here.

Adrienne Woods:

And we also have Rebecca Griffiths, who is a post-secondary learning research director with Digital Promise. Welcome, Rebecca.

Rebecca Griffiths:

Hi, Adrienne.

Adrienne Woods:

So we are members of the LEARN Network, which is an IES-funded initiative led by SRI that, for the last three years, has investigated how researchers and developers can effectively scale their programs and products and reach more of the school's educators and students who need them most. And this work is now evolving into a new federally funded initiative called the ATS Hub, which we'll talk about a little bit more later. But to start, could you tell us a little bit about the LEARN Network and the problem of practice that it was trying to address?

Kerry Friedman:

Sure. So the LEARN Network was created to address a really persistent challenge that we experience in the field of education, research, and development. And that's the gap between generating evidence,

applying evidence, synthesizing evidence, and then getting it into the hands of the people who are going to use it to improve outcomes for students.

We really know that the quality of learning products and programs that are out there matters for changing students' trajectory and outcomes, but often the products with the best evidence base are not the ones that are making it into the hands of teachers and students at scale. And so our goal with the LEARN Network has been to support the development, adaptation, and preparation of evidence-based products to make them more scalable, to get them ready to move from research to practice. And through the LEARN Network, we've had the opportunity to support four research and development teams that are enhancing their math or reading products with the goal of getting them to more students to accelerate learning.

So on that supply side with researchers and developers, our capacity building has really focused on helping them prepare their products for real classroom context. And we've done this through coaching, through training, creating new tools to help them think about things like usability, decision-making, and implementation at scale. We've also been able to bring in experts in areas like marketing, commercialization, things that researchers don't often have the opportunity to leverage to get their perspectives and be able to apply them to thinking about scaling educational products.

On the demand side, we've also been studying how schools and districts actually procure and adopt new products, what they value, what barriers they face, and trying to think about how those insights can help inform those who are designing products.

Adrienne Woods:

And so why is scaling a unique challenge in education as opposed to other fields?

Rebecca Griffiths:

Well, I think there are some structural factors that make scaling education particularly challenging for research-driven projects that are trying to get into the marketplace. In some ways, the barriers to entry for new projects is pretty low, anybody can create a website, could develop a new technology and start trying to get it out into the hands of teachers. But in other ways, the barriers to entry are pretty high in the sense that you have some large established publishers that have national networks of customer service representatives, salespeople. They've had long-term relationships with districts, and it can be quite hard to break through that.

The decision-making in education is very fragmented. So you have some states where you have state agencies who periodically create recommended product lists. And as a provider, you have to know when those review cycles are coming up. If you miss your window of opportunity, it could be years before you have another opportunity to get into that review cycle. Many decisions are made at the district or even at the school or individual teacher level. So if you're a new project, you're trying to figure out who is actually making the decision to purchase or use the product or innovation that I'm developing, and that in itself can be very complicated.

Another challenge is that there is an overwhelming supply of products. We see education technology attracts a lot of new entrants because it's an opportunity for people to want to do well and do good. So many entrepreneurs see education as a really attractive field to enter. But the result of that is that busy educators are constantly faced with decisions about which products and programs to procure for their schools and districts. It's an incredibly crowded marketplace. There's a lot of vendor advertisements, and it can be really challenging for educators to select products that are effective and well-matched to their students' needs and context, and just to sift through all of that marketing material.

A third challenge is that we see missing links between product research and development activities and the on-the-ground, everyday problems of practice that educators face, which could also hinder scaling. So this is particularly a challenge for research and development that's taking place in academic settings where researchers may be interested in ways to apply a theoretical framework in an education context, or they see a system-level challenge that they want to address and design a product or solution grounded in the theory or at those system-level challenges, but it can be hard to translate those solutions into one that addresses the sort of day-to-day problems of practice that educators are experiencing.

So this gets back to the barriers to entry for new products in the sense that the established providers have comprehensive solutions that are appealing to districts because it's a one-stop shop. If I buy this curriculum package, it addresses multiple subjects. I might have a tier one and tier two support supplement included with it rather than having to pick a solution for each of these individual needs. Whereas as a new entrant, especially one that's grounded in research, we tend to start small. We design a solution to a specific problem or a specific educational challenge, but those don't always match up well against the needs of districts or the ways they make decisions about what solutions to choose.

Adrienne Woods:

So we've obviously learned a lot about scaling over the past few years, and I'm curious what your main takeaways are for developers, researchers, R&D teams, even funders, what recommendations would you offer to the field?

Kerry Friedman:

Well, I can start. One big takeaway that we had was that the word scale can mean really different things to different people. And one exercise we did when we first started with the network was to ask the R&D teams we were working with and other experts and innovators how they defined scale. And the answers were really all over the map for us.

For some, you have your traditional research hat on, you're thinking, "Okay, large number of schools is the number that I need for a randomized control trial." Others may be a bit larger, but still a modest number of schools or districts when they think about what scaling their product would look like. And then on the other end of the spectrum, you have those who say, "Scale for me would be having this in every classroom in the country." And then you also have those that have maybe an intervention that is for a really narrowly defined audience, like learners with certain disabilities, and they might not be thinking about large numbers of folks, but serving as many of those students as possible. So that's just a sample of the range of responses that we got.

And then when you look to the literature on scaling, it goes really beyond numerical reach or downloads, but researchers on scaling are thinking about the depth of implementation: what does it mean to meaningfully adopt something? How response is an intervention to the context, and how can it be integrated and sustained?

And so for us too as a network, we're supporting product teams. We're not just thinking about the outputs for scale, but really the inputs. So like what infrastructure do they need as an organization to be able to grow and sustain over time? What are their customer support systems, their implementation tools? How do they adapt as things change? So scale is not just about getting your product out there, but being able to build an organization that can deliver and support that product effectively at scale over time.

And so from this takeaway, I think part of the advice to R&D teams and innovators would be just to think more broadly and intentionally about what scaling looks like for them and make sure to do that early. So

think about your vision for scale, and make sure you're aligning that with the vision that your funder has, that your partners have, anyone who's really invested in the process, and make that your vision, and revisit it often. So that means coming back to it when you're thinking about your research goals, your research methods, design features, as well as that organizational capacity that you're going to need to be able to achieve that vision.

Adrienne Woods:

It really sounds like it's not a one-size-fits-all kind of process or procedure. And so what about development teams? How can team structures, experiences, and motivations influence whether an education innovation can successfully scale or not?

Rebecca Griffiths:

I would say a lot of this starts with the mindsets of the folks who are leading the project. There's a real shift, especially, again, if the leaders are coming from a research background. There's a real shift from a research mindset to the mindset of somebody leading an enterprise that's providing a product or service to a market. As a researcher, you could think of us as being supply-side driven, that we tend to pursue our interests, the problems that we're interested in solving. We tend to think that the dissemination model for research is that I produce my research and I put it out into the world and expect that it will get picked up by people for whom it's relevant.

Whereas when you're putting a product or service out into the market and hoping that people adopt it, you really have to start thinking through the lens of the people that you're trying to serve: what are their problems? What is their workflow? Why would they choose my solution over all of the other options that are available to them? How are they going to learn about it? These are just not ways that researchers are typically used to thinking. I mean, they are if they're very good at marketing their research, and some researchers are really good at that, but it's generally not the way that they're trained to operate. So that mindset shift is really big.

I would also say that there's a sort of a team science involved. There's a lot of research actually about how to build interdisciplinary teams that are capable of developing solutions that draw from different areas of expertise. And to some extent, an entrepreneurial enterprise has to follow that kind of model. You need people who bring different mindsets, different skills, different expertise, and you need to create team structures and processes that allow them to understand each other's expertise and to make connections across it.

You also need people, I think, especially while you need those different areas of expertise, so people who understand product marketing, product development, system engineers who are really deeply involved with the product development, so they're building things that they really understand what it is they're trying to build. You also just need people who are willing to do what's needed, even if it's unfamiliar. So we hear a lot when we interview the founders of these projects, the core team, they have to do a bit of everything. They have to be willing to take on a lot of unfamiliar tasks and just fill in the gaps, even when they're doing something for the first time. So you need people who are comfortable in that unfamiliar space.

Adrienne Woods:

Yeah, one of the things that I heard you say was that for something to be successful, it really has to be addressing real-world needs and values. And so I'm curious how R&D teams can ensure that their innovations, whatever they're developing, really align with the users that they're trying to reach.

Kerry Friedman:

I think that's the question. One of the biggest lessons that we've learned is that thinking about skill starts early, and it begins with that deep understanding and alignment to what your users need and what they value, which might not necessarily be the level of impact that your product might achieve. Whereas that performance is really important, there are lots of other factors at play when educators and leaders think about the types of products and programs that they run in their schools.

And as Rebecca said, sometimes we have to step outside of that research hat, that research setting, and recognize that we're a step removed from that process. So I haven't been in the classroom for a while, but that's my context, and it's about 15 years old. And so when I think about how is this going work in a classroom, that's where my brain goes. But what I really need to do is rely on building authentic partnerships with those people who are living the reality right now: the educators, the schools, even the students, the families. And being able to co-design with them, being able to really listen to what's feasible and what they value in their context, and then doing some ongoing testing and refining from start to finish, keeping those user needs and values at the forefront.

One approach that's, I think, helpful in making sure you cover the range of user needs is this idea of designing from the margins. And what that means is really thinking about who are the students or the teachers or whoever your audience is who are most impacted by a particular problem of practice that you're seeking to develop a solution for, and letting their lived experiences really drive the design. And when you do that, you often are able to create solutions that are more effective, not just for those most impacted people, but for everyone.

Another approach that we emphasize at LEARN is what we call the PRCC framework. PRCC is performance, reliability, convenience, and cost. And we found that even the most effective products can fail if they don't align on all of those dimensions.

And so convenience, for example, might be how easy it is to implement something, how it fits with existing workflows and systems. That's going to be a minimum requirement for adoption. That's just not a nice-to-have for folks. And so thinking about those four dimensions is really crucial.

Finally, I think when you are able to do that real, authentic co-design and partnership with educators, you can develop champions for your work, champion users, and those are people who really, they see value in what you're doing, they can advocate for your product with their peers, with their leaders, and they're really powerful levers for scale. So not only is that user input and engagement really important to developing the product, but then to actually being able to get it to more people to scale.

Our LEARN Network research tells us that teacher recommendations are among the most influential in districts actually identifying and procuring new products, as well as recommendations from peer schools or districts. So it's likely that a neighboring district telling you that a product is really strong and working really well is going to be much more influential than you looking at the research brief on it. That's really what's going to impact your decisions. So you need those champions out there who are going to help you to attract new users.

Adrienne Woods:

Yeah, definitely. And to that point, Rebecca, you mentioned something earlier about just how crowded the educational market is. I mean, there's so many products out there that all fit potentially the same kind of niche need. And so what have you learned about school and district leaders' decision-making process when it comes to selection and adoption? And again, how can R&D teams position themselves to stand out?

Rebecca Griffiths:

Well, I think Kerry just spoke to some of our research findings about what factors are most influential for those decision-makings. It's really recommendations from peers. I think in order to stand out, educators do value research and the credibility that comes with a mission-driven, research-grounded organization. As Kerry said, you don't want to lead a sales pitch with the results from your randomized controlled trial, but I think having that evidence is really valuable as long as you can present it in a way that is accessible to the people that you're trying to reach.

I think the other really important factors for standing out are, as Kerry said, it's not just about performance, the sort of efficacy of your solution; it's also about the convenience, the cost, the reliability. So making sure that the scope of your product is a good fit with the way that districts make decisions about purchasing solutions, making sure that it integrates into existing technology infrastructures, making sure that it provides the sort of reporting features that they require, that they want. All of these other considerations are going to be really important in helping districts decide that your solution is the one they want.

Kerry Friedman:

I would add too, I think that our product teams really valued support from marketing experts. And so really thinking about strategic messaging. And as Rebecca said, that value upfront might not be your effect size; it might be how much teachers and students are engaged and how much they love it. And so having a really strategic approach to talking about and marketing your product is important, and it's something that we are so turned off by often as researchers, is we're not marketers, and that feels icky to us. But I think the conversation and theme I'm hearing is embracing the discomfort around some of these things that are not traditionally part of the research world, but are really so important when you're trying to reach people and have an impact.

Adrienne Woods:

And definitely marketers who are in the education space specifically, because that was one thing that we heard is sometimes just knowing all the intricacies of that system can be really challenging for folks who have not been in it or it's been 15 years since they've been in it. So having someone who's current and up on that, I think is a good thing to do. So what types of capacity building, whether in strategy, systems, or mindset, are most essential for helping education R&D teams scale their innovation successfully?

Rebecca Griffiths:

Well, I would say it depends a lot on what stage they are at. So for teams that are just getting started, I think helping them to really ground their design in user needs and a deep understanding of their users' contexts, how the solution has to integrate with their workflows and with existing systems, is really important.

As the product matures, then starting to help them think about the pathways to scale, what their transition strategy is, is really important. So a lot of ed tech innovations might be thinking about licensing the software they've developed to bigger established publishers. That is certainly a legitimate pathway. And in that scenario would say don't wait until you are at the end of year five of your five-year grant to start having conversations with publishers and finding out if what you've built is useful to them, or how you might think about licensing your intellectual property, but start having those conversations earlier to get a sense of what holes they're looking to plug, what gaps they need to fill in their product portfolios, and how your intellectual property could strengthen their products.

If you are planning to take your solution to the market yourself, then you'll need to be building some organizational infrastructure, you will need to have a customer relationship management system, you'll need to think about building the technology infrastructure that would make it possible to provide your solution at scale.

So in that sort of intermediate stage, we try to help projects start to think ahead about what that transition strategy looks like and what foundational components they need to be putting in place.

And I would say throughout this, we tried to help the product teams we worked with to think big about what's possible. What would it look like to get your innovation into 10,000 schools? And what would that mean for you operationally, especially with respect to ensuring strong implementation of your intervention, because that's often a real concern for educators, what kinds of supports or blueprints, training services or supports would you need to put in place for your solution to scale with fidelity to make sure that it's still having the kind of benefits for students that are important to you?

Kerry Friedman:

Yeah. The other thing I would add is in terms of capacity building, I feel like it was really powerful when we could have people who had done the work to scale or were on that journey to actually be able to talk through their experience and have folks find the places where they can relate and learn from those who have done it already.

Adrienne Woods:

And one thing that we've talked about a couple times is the disconnect between being trained as a researcher and trying to get something that you've created, that you believe in, that you think works out into the world. And I think this is especially important because we're situated at this time when I think we've been hearing a lot of buzz about education R&D and about scaling and about getting research-based or evidence-based products into as many schools or the hands of teachers and students as possible. So if you are someone who is new to developing educational products and programs and scaling them, or if you've already got an effective innovation and you want to figure out how you could actually achieve that broader adoption, what kinds of tools or resources could you turn to?

Kerry Friedman:

So when we started the LEARN Network, we started to build from SRI's existing Invent-Apply-Transition framework because we really wanted to take a framework that was strong and enhance it to account for the education context, which, for all the reasons we've talked through, is complex and has a lot of different actors. We wanted to make sure we were updating that in a way that addressed that context.

And so from this framework, we've been able to develop a host of tools. So the framework really helps with thinking about the stages of innovation. It starts with that invent stage where you want to start with those user needs, and you want to get a good grounding and develop your prototype, moving into the apply stage where you think more about your broader market, the key players, the infrastructure, the policies, the competition, all that helps you to refine your innovation. And then in that last stage of transition, that's when you're actually doing that move to scale your product, thinking about how your systems look at a scaled level, and exploring different pathways that create a financially sustainable approach to getting your product out there.

And our LEARN to Scale Toolkit really guides researchers through these three stages, and it defines key activities within each of those stages that can be integrated into the more traditional R&D approaches and processes, and in a way, that helps them to develop and test a product that is more likely to achieve impact at scale.

In addition to our toolkit and integrated actually in the toolkit, we've profiled different products that are on their journeys from development to scale, call it our Stories of Scaling series, and users can learn from those, get some takeaways about what's worked for others or some of those barriers or hiccups on the path.

Another tool that innovators might find really useful is our LEARN Procurement Data Dashboard. And we've talked a little bit about some of the research we've done on how educators and leaders make decisions about which products they're selecting for their schools. And that dashboard provides all the data behind those findings on how K-12 school leaders across the US are making decisions about educational products and also how they use research and evidence in those decisions. And it's nationally representative, built on over a thousand responses from school leaders, and so it's a really useful tool. You can filter it by different settings that you might be interested in learning a little bit more about how procurement works in those areas.

Adrienne Woods:

Great, there's so many good resources, it sounds like. So the LEARN Network is wrapping up at the end of this year, but I understand that there's an exciting next step on the horizon. So can you tell us a little bit more about that?

Rebecca Griffiths:

Sure. Well, we are getting ready to launch the Accelerate, Transform, and Scale Hub. This is a partnership between Digital Promise, where I work, and SRI International. We'll be supporting the Institute for Education Sciences to support their investments in education R&D. So IES, for short, runs several grant competitions that support education R&D, such as the Seedlings to Scale grants, the transformative research grants. They have some R&D centers that are focused on educational innovation, specifically using AI technologies.

And as the hub, the ATS Hubs, what we call ourselves, our mandate is to help build capacity among applicants and grantees in this program. And more broadly, we are seeking to build a strong field of education innovation. So we think about this in terms of building a set of essential practices, such as data governance and privacy policies, team science, how people learn to work together across different areas of expertise, a knowledge base, so what is the body of research and knowledge that informs this work? We want to raise up thought and ecosystem leaders in this space, and we want to map out pathways to success. So we want to help these grantees figure out what their pathways to scale are and to sustainability.

So we're going to be ramping up this work over the next couple of months, and we're really looking forward to building upon all of the great work that the LEARN Network has done. We're going to combine some of these tools and resources with work that Digital Promise has been doing through another research network called SEERNet, and we'll be announcing some new opportunities for grant competitions. We're going to be running an ideas challenge next year. So we have lots of exciting things coming up.

Adrienne Woods:

So exciting. Yeah, I'm also really looking forward to seeing what comes out of the ATS Hub and seeing what's in store for both of our teams in the future. So this has been a really wonderful conversation. And Kerry and Rebecca, thank you so much for joining me today.

Kerry Friedman:

Thanks, Adrienne, it was a great conversation.

Rebecca Griffiths:

Great to talk with you both.

Adrienne Woods:

And thank you for listening to the SRI Homeroom. We will see you next time.

Narrator:

Thanks for joining us on the SRI Homeroom, produced by SRI Education, a division of SRI.

Our guests today were Kerry Friedman and Rebecca Griffiths, and our host was Adrienne Woods. Learn more about them and their work in today's show notes.

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