Webinar Transcript–Predict and Prepare: Taking Action to Address the Teacher Supply Chain

Regional Educational Laboratory Central

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Overview

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Transcript

DAVID YANOSKI: All right. Well, welcome, everybody. I'm glad you were able to join us today for the webinar Predict and Prepare, Taking Action to Address the Teacher Supply Chain. Excuse me. We're excited to share some of the resources that we've developed here to help states especially be able to predict teacher supply needs. And we all know that teacher supply is going to continue to be a major issue for us.

A couple housekeeping things to take care of before we get started-- first of all, we do have live captioning available for today, if you do need it. There will be a link that shows up in the chat box. In fact, it's already there. And if you need live captioning, go ahead and copy and paste that link into your browser, and that will get you to the live captioning service, and they will be able to-- you'll be able to access live captioning. So a sign-in page will pop up. Just go ahead and click Register. You do not need to fill in any information for that, but that will get you access to the live captioning service.

In addition, we will address questions throughout the webinar today. We are using the Q&A box for questions, not the chat box. So you can see the Q&A box. It may be on the upper left-hand corner of your screen. It may be down in the bottom right-- or bottom of your screen, but it'll say Q&A with two little thought bubbles there.

You can use those and-- to ask questions directly to the presenters. I will make sure that the presenters get those questions and are able to respond to them. In addition, the chat goes directly to those of us here at the panel, so if there's technical issues or things like that, you can use the chat box, and our technical person can see if they can help you out with that. But otherwise, for questions for the presenter, please go ahead and use the Q&A box.

Just a little bit about who we are and why we're here talking to you today-- we represent REL Central-- Regional Educational Laboratory Central. The REL program-- there are 10 RELs spread across the country, REL Central represents the states of Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming. And we, the REL programs, are a federally funded program through the Institute of Education Sciences, part of the Department of Education, and we exist to support the applied research, the use of data and evidence to support decision making, and to provide technical assistance to states, districts, and schools within our region.

And so the work we're going to talk about today is work that happened to happen in the state of Missouri, which is one of our states. In addition, so we have the larger REL program and REL Central, but we also have research alliances underneath each one of those. And this work was conducted under the Educator Pipeline Research Alliance, which is a group of people from all of our seven states in our region that get together to discuss and to work on issues associated with the Educator Pipeline.

And so the work that we did here today with the teacher predictor model is part of a portfolio or research agenda of work that the Pipeline Research Alliance has been doing over the course of the last five years. And in this particular one, you can see that we focus on not only educator preparation, but also evaluation. And then this particular project falls under the umbrella of educator mobility.

All right, so our presenters today-- my name is David Yanoski from REL Central. I'll be facilitating today's webinar and joining us today are Josh Stewart, who is a senior researcher at Marzano Research and REL Central; Paul Katnik from the Missouri Department of Elementary and Secondary Education, who was our primary partner for this work; and Beth Kania-Gosche, who is currently from the Missouri University of Science and Technology and the current president of the Missouri Association of Colleges of Teacher Education.

And we will give Beth and Paul an opportunity to share anything more about themselves in just a little bit, when we bring them in. But first, we're going to go ahead and we want to do a poll first. So a poll should pop up, and it's-- just give us a little bit of information about who you are so that we have a sense of who our audience is and can modify our responses accordingly.

So I'm going to hold this up for about 10, 15 more seconds. OK, about 5 more seconds, and then we're going to go ahead and close it out-- all right. So we have an interesting group here today-- primarily state administrators, officials, or policy makers, some representatives from higher ed-- a whole bunch of Others. And we'll make guesses about who you are out there, but it's wonderful to have as many people join us as we have today. It's great to have these numbers available.

OK, so let's go ahead and get started. So our goals today-- really, our primary goal is to-- first, we want to describe the development and use of the Missouri Teacher Predictor Model, which was a model that REL Central assisted the Missouri Department of Elementary and Secondary Education in developing to help them predict teacher shortages in out years based on previous years' data.

We want to go ahead and talk about that and-- but more importantly, we want to really get into and dive into how Missouri educators-- not only the state, but also the EPPs, and maybe even LEAs-- are using this data to help guide decision making and help make decisions about how we can address teacher shortages-- and then just share a little bit about how you might adapt this model for your own use and the resource that is available to you.

So we're going to start off with an introduction to the Missouri Teacher Predictor Model. So at this point, I want to bring in Josh just to talk a little bit about what the model is, how it was developed, what it looks like, and then where states can access information-- more information about it. So I'm going to turn this over to Josh at this point.

JOSH STEWART: Thank you, David. So as David mentioned, this work was done in partnership with the Missouri Department of Elementary and Secondary Education. And like many state education agencies, DESE was really interested in and wanting to focus on analyzing teacher shortage data to ensure equitable access to excellent educators for students across the state of Missouri.

So this joint effort between DESE and REL Central led to the development of the Teacher Predictor Model, or what we call the TPM, which looks at patterns across the state to identify shortages that essentially ed prep folks, folks in districts and schools might be able to leverage to guide decisions throughout or across the teacher pipeline.

The TPM uses teacher assignment data and student enrollment data from recent academic years to make predictions about subsequent years. And in the testing of the model, we looked at historical data and tried to predict, within a historical range, what some of those trends might be, and came up with a set of recommendations-- that are presented in the resource that I'll describe shortly-- that might guide your decision on what type of model might fit your needs best.

The TPM can make predictions for a variety of teacher subgroups, including subject area, grade level, and regions within a state. And one really important factor here is that the TPM leverages data that a lot of state administrative databases have on hand. And it also is-- can be conducted with software that folks generally have available to them-- things like relational databases, Microsoft Excel, and R, which are all commonly used software packages that most state education agencies might have on hand.

And so the link you can see down here towards the bottom of the page provides the link to our methods paper, which outlines the details on how you might build a model. The whole process was hooded by my colleague Robert Reichardt, and you can see, throughout the course of the project outlined in the paper, there's really a lot of good thinking on what type of validation process you might use.

Again, like I mentioned, we used historical data to think about, do we want to base our predictions off of two years, off of four years? Are there other considerations we might want to put into the model in order to make sure that our predictions are accurate based on the state that we're looking at-- in this case, Missouri? And one exciting piece that culminated-- or that was one of the culminating factors of this work was a dashboard that now lives online that folks at the Department of Education or DESE can use in order to have discussions with folks in ed prep programs, district folks.

And so it's taken, I think, an even more streamlined turn, in the sense that it's available online, so you don't have to worry about having any sort of statistical expertise in your back pocket-- so just wanted to highlight a little bit of the background of the model. And as I mentioned, we really

worked in partnership with DESE on this one, and so the work obviously wouldn't have been possible without our colleagues there.

DAVID YANOSKI: Thanks, Josh. I think we're good. I'm going to have you hold out, in case there any other questions that come up. But just for our participants, the link to that methods paper, which describes how this model was developed and how it is all put together, is in the chat at this point in time. So you can go ahead and link to that.

The online dashboard is not available-- publicly available at this point in time, but if you have further interest in learning a little bit more about how the online dashboard was developed, go and reach out to us at REL Central and we can see about providing some more information about the online dashboard.

All right, so now I want to just get into-- and bring Paul into the equation and get a sense of-- so Paul, you have this tool that gives you a bunch of numbers. What do you do with it? How do you turn those numbers into action? So just talk a little bit about how DESE is using this tool to help guide your decision making.

PAUL KATNIK: Yeah. Thanks, everybody. Good afternoon. As you've already heard, I'm Paul Katnik. I'm with the Department of Education in Missouri. Our office works closely with all the educator preparation programs in the state, like my colleague Dr. Kania-Gosche but also with school districts across the state in terms of development and evaluation. And we also housed the certification, site for the state and so we provide certification for every educator in the state.

And I bring that to your attention because it puts us at a unique position to sit and to really watch how the workforce functions in our state. And that has led to an annual presentation that we do to our state board of education every year that-- the status of the workforce. What is it we're seeing?

And over the last several years now-- really, six years, actually-- the data that we were reporting on became more and more concerning. There were trends happening that gave us gave us some concern. Enrollment on our campuses and our teacher education programs has been on this six-year slide, this decline-- which, I think other states would say, yep, we've seen that as well.

The number of certificates we issue based on the graduates coming out of those programs, of course, is down as well, lower than we've seen years back. And then there was retention rates in

our school districts that worried us as well. We lose a lot of teachers at year three and year five marks, and now in the state, over half of the teachers in our state have less than 10 years experience.

So we have a young workforce, and we have these risk years that happen around year three and five, where we lose way too many. And so it's the equivalent of pouring some water into a bucket with a hole in the bottom, and the amount we're pouring in is getting smaller and smaller, and we're still losing it at the other end.

And so it led us to say, well, what do we do about that? And we felt like recruiting, and trying to up those numbers and turn around that slide in our enrollment in programs was a good start, but we didn't want to be-- we wanted to be more precise than just, say, hey, we need people. We need lots of people. So be a teacher.

We really wanted to add an element of intentionality to it, where we could be thoughtful about what it is exactly we're recruiting for. In our state, we've had years of needing more science teachers, of needing more math teachers, new special ed teachers. We have staffing challenges in some parts of the state that aren't quite as bad in other parts of the state.

And so to do just a statewide campaign, where we're recruiting everybody-- well, we don't need everything everywhere, and we wanted to be more thoughtful and more informed about how we recruit. And so what the model has helped us do is provide that information.

As Josh described, it takes a bunch of our own existing data and basically makes guesses about, if nothing changes, here three years out is probably where you're likely to be in. Given the consistency of shortages we've seen over the last six years, I tend to think that's probably true.

And so it allows us to go into regions to work with my colleague Beth and the universities in those regions, to work with our school districts in those regions to say our best guess is a couple of years from now, we're going to really need this kind of teacher in this part of the state.

And so let's get active about recruiting to that particular need. And I've just become convinced that the pipeline to the teaching profession begins in high schools. That's where they're at. We can say with a lot of assurance that tomorrow's teachers are sitting in high school classrooms today.

And we can go looking for those teachers who would be good special ed teachers, or science, or math, and recruit them in that part of the state, where they've got roots and are likely to come back and teach-- especially if we believe that research on that, that a lot of teachers teach within 20 miles of where they went to school.

We can really be informed about who we're recruiting, build partnerships between the state agency, our higher ed colleagues, school districts to work together, get them ready, get them back in those classrooms. That's the reason it was developed.

DAVID YANOSKI: So Paul, tell me a little bit about what kinds of information you get from this. I think I've heard that, yeah, we can know that we need more science teachers, but are there other pieces of information that the model is able to tell you? How are you able to cut this data, and what kinds of questions are you able to answer with it?

PAUL KATNIK: The biggest need I had was I need to know what kind of teachers I need-- we certify across 60 different areas-- what kind of teachers we need and in what regions of the state, so that we could develop the partnerships there to work on those particular needs. And in other parts of the state, there may be different kinds of needs.

And I needed a hierarchy as well, I think. I wanted to hit the biggest need areas first, but all of our energy, all of our attention on the really big need areas. I think there's an equity component there, that the same kinds of students always come up short. So let's take care of the biggest needs first. And that's the kind of data this gives us.

DAVID YANOSKI: So Paul, we have a question and the Q&A box wondering about the percentage of new teachers in Missouri. What percentage of new teachers are traditionally certified or prepared versus alternatively prepared?

PAUL KATNIK: It's a high percentage. I don't have the numbers right in front of me, but alternate maybe accounts for 20%. The vast majority come through the traditional four-year kind of program. We've seen increases in that alternative, as folks have decided they want to change to education after out doing something else.

And we're very supportive of that, getting people who were in some other line of work or have some other degree, who then decide, I really want to be in education. We can build on that experience and maturity that they already have and get them into classrooms a little bit quicker than we are when we're working with somebody who's younger and just starting out. But still, the vast majority is the traditional.

DAVID YANOSKI: So Paul, you have all this data, and now, through the use of the Predictor Model and through the dashboard that that's contained within it, it makes it a little bit easier to access and use that data. Can you give some examples of some policies or things that you've done based on the data that you've gotten from this model?

PAUL KATNIK: Yeah. I think it's useful really at three different-- in three different areas in particular. If we say to school districts in the southwest part of the state, we're seeing some numbers and it looks like math teachers are going to be a big demand here in a couple of years, it allows every school district to take a look at their current math teachers in their school right now and to say, you know what, if I don't want to be filling vacancies, I need to pay attention to how I'm supporting my math teachers-- what it is we're doing for them, what kind of professional learning we're providing, or support systems we're providing.

So I think it gives some level of information for school districts to approach what they think are going to be their future vacancies that they're going to have to fill. It certainly gives my colleague Beth some information to use. She's got different programs on her campus.

She gets to focus in on a couple of programs that-- in particular, we need to start cranking out some candidates in a couple of years so that we can change that data. What we're trying to do is make it not come true.

But it also informs us here at the state. If we're not getting candidates through, and we take a look at pass rates, for example, on our assessments, and they don't look very good, and we combine that with the fact but this is an area where we really need teachers, let's set up work groups. Let's explore those test frameworks. Let's make sure the test is doing what it's supposed to do.

And I also think it's very important that the state's education agency be the number one cheerleader for the profession. We have to be the number one advocate. And it was a little

surprising to me that, going back five years ago, we didn't really have a role when it came to recruiting. And I just wondered why. And so we're trying to get far more active now, and lead the charge and bring along with us our higher ed partners and our school districts-- do it together, because that's really what it's going to take.

DAVID YANOSKI: So you've taken this data from the TPM, and you put it in this online dashboard. Is that online dashboard-- have you shared that with other people in the state? Do other people have access to it, or is this something at this point that DESE is holding tight?

PAUL KATNIK: People might think different than I do. I don't think we created the model for the model's sake. It's not something I want to march around the state and say, oh, at the model we made. It was made to use the information in really meaningful, intentional ways, and so we take the data that it gives us and we produce infographics that are nice one-page-- hey, why should I care about this issue?

And it summarizes that data. It's something we can circulate to districts, to higher ed institutions very easily, get the message across. Then we can turn really to what I think is the much more important work, which is, what are our strategies for doing something about what the data is telling us?

Math teachers-- hard to come by, because there's a lot of careers you can get paid a whole lot better in math. That's the problem we actually really need to solve. So the data just gets us pointed in the right direction. Then we need to put our energies into the really tough task of doing something about it. And if we never figure that part out, then the data itself really hasn't helped us much.

DAVID YANOSKI: So I have a couple of questions in the chat box for you, Paul, and one of them revolves around this idea of strategies. You just mentioned that math teachers, for example, can get paid far better in other fields. So does Missouri use any financial or other incentives to attract teacher candidates in shortage areas?

PAUL KATNIK: Here it comes-- not yet. Not yet-- it's something that we need to do. We've been talking about it a lot. We had a two-day retreat and meeting with our state board of education this week. This was a major topic of conversation. The bottom line is-- and I wish I had a better answer today-- is we need to do far better than we do now. We really do.

But I need the ammunition to sell the case. I need to be able to say, here's why we know this is an issue. Now we got to solve this. So that's where it starts, and that's kind of where we're at.

DAVID YANOSKI: So we've talked about teacher candidates in terms of shortage content areas, but we also know that Missouri, as in just about every other state, has a diversity issue with its teacher candidates. Can the teacher predictor model help you address the diversity of teacher candidates and the diversity of the teaching workforce at all?

PAUL KATNIK: Yeah. What it does for me is it affirms what we guessed we thought we knew. It actually tells us that we were right. There are geographic parts of the state that really struggle with finding candidates far more than other parts of the state. And then we're back to the same question we just answered, which is, knowing that, what are we going to do about it?

And the thing is we need to put more resources to those geographic part of the state-- have the will to do that, to put more geographic-- more resources on those geographic challenges and address the fact that some school districts struggle far more than other school districts do. And what can we, as a policymaking agency, do to help them with that particular challenge?

DAVID YANOSKI: So I think the last question for you, Paul-- and then we'll bring Beth in here-- have you had any conversations yet about potential federal funds, and the use of federal funds to help address this issue?

PAUL KATNIK: We have. And that's been the big topic of conversation that we had this week with our state board of education. And so we're trying to finalize what our strategies are going to be around this.

And of course, the state agency really doesn't solve any problems by itself, so there's a lot of partners across the state, both on the PK-12 side as well as the pre-service side-- a lot of partners that we're going to have to engage to address this together if we're going to get something done. So we're finalizing those details, but we absolutely have plans to do that.

DAVID YANOSKI: OK. Well, I'd like to go ahead and bring Beth in here as well, because this next question that's coming from the group-- and if there are any questions from the group,

please go ahead and drop those in the Q&A box, and I will do my best to make sure that our panelists address those.

This next question is about data on the pipeline itself. Do we have any idea who's out there, in terms of potential teachers? Do we know if we're going to be able to develop a supply to meet the demand? I know it's a big question.

BETH KANIA-GOSCHE: It is a big question. I wish we knew. There's never enough. There's never enough of them. I work at a primarily STEM institution, where we prepare many engineers which is not traditionally the type of institution that prepares many teachers. And we are fairly small.

We do, however, function as one of the few institutions in our region in Missouri-- I'm in the south central region of Missouri. To give you some geographic context, Missouri is very large. It takes six hours to drive from one end to the other, with many, many, many, many, many rural school districts that struggle to find teachers.

Some of them are moving to-- even before COVID, were moving to a four-day school week, in part because they were going to use that to attract teachers, because they need teachers to be able to commute from so far to find people. And just anecdotally, I always have principals asking me for more teachers.

And so the regional aspect of a model, I believe, is very helpful because, if you look at the statewide data, my teachers-- my graduates in south central Missouri-- chances are they're not going to want a job in northwest Missouri or northeast. They want to be close to home, or they may want to move to the urban center.

It's very difficult to get them to move to a rural area where they've never been. And so many institutions in Missouri are doing the work they can with Grow Your Own programs, but funding is always an issue there, just to be perfectly honest. In Missouri, we don't do a good job of funding higher education, and I would say also in the way our state functions.

I have to answer to Paul on the teacher certification part, but I also have to answer to the Missouri Department of Higher Education and Workforce Development for the-- they have the

authority for issuing my degree. And they don't like to see programs with small N sizes, and unfortunately, many of those high-need areas are there programs with the small N sizes.

And so what does higher ed want to do? They're giving us pressure to close those programs down. I'm just being honest about it. It's a tricky position to be in when you're at an institution, and resources are an issue. It would be fabulous if we could find scholarship money and get donors to help with those students.

I've had some luck on a small scale. I had a donor who gave funds for all of my students next year, where they don't have to pay their testing fee. These are just very small. But that's not a system, and it depends on individual people understanding what the problem is and having a relationship to-- and the resources themselves to be willing to donate.

What I've just found in my experience going out to rural schools, to the college fairs and such-- I could always tell when there was a strong teacher in that building, because I would have more students than usual who wanted to be in, say, chemistry-- that they want to be a chemistry teacher. I knew there was a strong chemistry teacher in that building, because good teachers inspire more good teachers.

The reverse is that, in areas with a teacher shortage, kids don't have a good experience in school. And if they don't have a good experience in school, they probably don't want to be a teacher, and they don't want to keep going.

I believe that's part of the reason we're having issue we are in STEM fields too is that, if we don't have engaging STEM experiences, because those teachers just don't have the training or they're not qualified to do that, that's why we're having a dip in enrollment in institutions like mine, where we're looking for engineers. Where do they figure out they want to be an engineer? Well, they take physics in high school.

Guess what-- we don't have enough physics teachers. It's just a cycle, and we're just, with COVID, just going even more down the pipeline with that. And so we've really got to figure out something, and there's much more urgency now.

DAVID YANOSKI: Yeah. I don't think there's any question about that. I think districts, we're going to find, in states are faced with even greater challenges based on what we've just been

through, and are continuing to go through. But let's jump right back into the Teacher Predictor Model specifically.

So what do you need? What data do you need in order to help you recruit teachers? If you could wave that magic wand, what information would you have that would help you figure out and address these shortage areas?

BETH KANIA-GOSCHE: We have high standards for teachers in Missouri, and in many of your states too. Just to be perfectly frank, not any student can become a teacher because of what we've put in place in terms of the content-- we have a content GPA of 3.0 in Missouri. And I know, at my institution-- or in many institutions, trying to do that in something like physics, or biology, and chemistry, just-- the national mean for chemistry GPA is not 3.0, so we've already excluded half of the national sample of people of chemistry degrees.

And I completely understand wanting high quality, but if they don't-- guess what happens when they don't have a 3.0 in chemistry. They can go get a job, and in Missouri, probably make almost twice as much. At my institution, they-- for recruitment, they talk all the time-- it's $65,000 with a degree from [INAUDIBLE].

I always say that my graduates bring that average down, because they're making $35,000 in Missouri. So if they can't meet the standard, they just go get a job making a lot more money. And that's tough. So if there's any way to-- sometimes really simple things, like looking at the cost of your textbooks. Every little thing that we add-- a background check, a test-- all of those fees add up, and we don't think about that, because they're spread out and they're a little bit at a time.

Students in teacher ed, I think, also-- at least in my institution-- they're more likely to be Pell-eligible than the typical student. They may be more likely to be a transfer student. So they're just a different type of student, often with more financial aid-- financial need. And so even the cost of a textbook, a $77 test-- that's a whole day they have to work just to take that test, and they need that money for rent, and for food, to be perfectly honest.

At my institution, we were part of an experimental study for a federal work study, where my student teachers are getting paid like student workers, but they're just student teaching. And it's lovely. It is, I think, about $7,000 that they can earn through that program.

And I will tell you-- knock on wood-- this year, with all the challenges that we've had with COVID, we have not had any student teachers withdraw. Every semester prior to that, we've had at least one. And I know that there's other variables, but I know that experimental program like that-- letting them work for that money just to be a student teacher has helped so much.

So if there's a way to get them paid for those internships, for those field experiences-- because in other professions, they do get paid. Like a business school internship-- you get paid for that. So any way we can figure out to be creative with whatever funding is available at your LEA, your local partners-- trying to work with that.

Our candidates can be substitute teachers when they're outside of their field experience. And they already know the students in the building. That's great experience. Get them paid. I would much rather them do that than deliver pizza, which is what a lot of them do, because they have to, or they can't afford to be in school.

PAUL KATNIK: And David, just to jump in and reinforce what Beth said too, she's right. It's all the little fees that really stack up and make it very difficult. And so we were able to petition and successfully convince our governor to use some of the CARES funding that came to the state to reimburse background checks for educators this year.

So we sent out thousands of dollars to folks who had to get their background check, and then we paid them back for that. It's not a ton of money, but every little bit helps. And I think it also communicates the message-- you matter. We value you, and we're trying to help.

DAVID YANOSKI: So you've talked about some financial incentives that you've been able to put in place that you-- I love the idea of paying-- paid internships for teachers. Are there other strategies that you've been able to try, successfully or unsuccessfully-- but different things that you've tried to try to increase that workforce and bring more candidates in?

BETH KANIA-GOSCHE: Whatever I can think of, we try. And some of it is actually within my own institution. As I mentioned, we're primarily STEM institution. And there's some research that indicates half of STEM majors have considered teaching at some point.

And it sounds really simple, but it does take a lot of time. I have faculty who just will ask for five minutes in freshman level STEM classes just to talk about teaching, and just to let them know

that that's an option, and how it works, and how great it is-- because you don't hear about how great it is.

So many of my students tell me they were told by their own families or their own teachers not to go into the profession. So the ones we have-- we are so lucky we have them. And there's probably so many out there who were convinced by someone who just said negative things about teaching-- which, it's no wonder, with all of the current events going on.

We offer a certificate-- a little 12-hour certificate-- in teaching and learning, and I market that for if-- do you want to be a professor one day? Well, professors teach, and most professors don't have any teaching experience. Do you want to go into training? Are you going to work at a non-profit or a museum?

And I think, if we can get them in the door-- because to be perfectly frank, we are amazing teachers in higher ed. We have degrees in teaching. Come to our class. It's amazing. They get hooked and they see, oh, I want to do that. And we might be able to get some of them in teacher education.

That's just for students within the institution. I know we have, across Missouri, some institutions that do a dual enrollment with high school students that may want to-- may be doing tutoring or working with elementary school students, high school students who know they want to be teachers, and giving them some kind of college credit-- because in Missouri, our districts are rewarded for that, the way the report card functions here.

And that's a great way to start partnerships as well with your district. My institution does not allow that, so it just depends on how it works, on your institutional policy. And basically, I'd use my own students for a lot of recruiting, because I think high school students would rather talk to a college student than me, which is fine.

But they're very engaging, and they inspire me every day when I-- whenever I go to their presentations. I mostly just let them talk, and I'm just there for information, to give accurate-- here's what the certifications are. Here's what we have. And I can answer questions about-- factual questions.

But my students are the ones who are the best recruiters, and I think we could maybe do that a little bit more. I do pay them. I pay them as student workers to do that recruitment, so I don't expect them to do it for free. And I didn't need to coach them at all, because they just say-- they're really passionate about teaching.

Many of them started in another major, as an engineer or something like that. They were always drawn to teaching, but they were also drawn to making more money, and then came back around to teaching because it was their passion. And so they're great ones to talk to high school, and even younger students too. I think a lot of students make decisions in middle school.

PAUL KATNIK: To Beth's point, David, we have a narrative problem, to be honest-- a branding problem with our profession-- heard from this one gentleman who had decided to be a teacher-- and he's a teacher candidate, and he said, the thing I don't get is, why do I have to answer the question "why?" And I get asked that a lot. It's like I have to convince people that I've made a good choice for my life.

And we're going to have to turn around that narrative, and that's going to take some really concentrated effort. And I applaud Beth and the work she does with using her internal assets to do that recruiting.

We have to do the same thing, and so we talk to our school districts a lot about the fact that, for virtually every teacher, there was some teacher in their past that planted that seed. And they really are the original recruiters of future teachers. So it doesn't help us when you talk to teacher candidates, and they say that their own teachers said to them, why would you want to be a teacher? Why would you want to do this job?

And that's part of what makes the narrative challenge so difficult for us trying to keep the profession vibrant, and alive, and everything. People have to start talking about, what really are the good parts of the profession? And I get it. It's been a very tough year for everybody. Teachers, in many, many ways, have had a very difficult year, and I get that.

But we're not doing anybody any favors by not engaging in a little succession planning. Every teacher in a school somewhere ought to be thinking, who's going to take my place? Which kid here I'm teaching today could be my replacement? And I should be courting them a little bit and talking to them about the great parts of the profession.

DAVID YANOSKI: So I think you're absolutely right. And I think, Beth, earlier, you said that the best teachers inspire the best new teachers, or something to that effect. Is there something that we can do at the state or EPP level to really support teachers in finding new teachers?

JOSH STEWART: One thing I was going to mention, David-- and to jump off of Paul's point-- the infographics that we're in the process of finalizing right now have a set of ideas, or-- I wouldn't necessarily say recommendations, but thinking along the lines of what Paul just said, having a publicity problem-- sorry-- that seems like a tongue twister to me.

Basically, we wanted to have some takeaways on the back of that-- like, here are your shortages in a particular region, and then here are some things to consider talking to your students about, if you're a guidance counselor or if you're an educator and you're trying to get your own students interested in coming back to work within that small radius that Paul talked about earlier.

And so talking about things like, for example, making a meaningful difference, having a self-fulfilling-- a meaningful occupation, where you really get to interact with the students and change their lives as a sticking point as to why teaching might offer something that another profession might not.

And so we wanted to really have both sides of that conversation-- here are the shortages, and then hear the things you can really think about as an educator, or as an administrator in recruiting those students who are in your high school right now-- or even earlier.

Paul, you helped you think through some of that language. I don't know if there's anything else you want to add there, but we wanted to make sure we had something to help change the narrative, since there is that publicity issue with teaching, in some cases.

PAUL KATNIK: I would just say that we have to be careful that we don't get swept up in this notion of, hey, we created a teacher predictor model and it's a fancy name for this high-powered model. That's not what it's really about I mean it's about having information that you can turn into infographics, turn into storylines or whatever to get at the really tough work, which is selling our profession for what it is, addressing the really tough challenges of raising salaries where they need to be raised, providing more support to Beth and her colleagues for the vital work that they do, working in partnership with districts and higher education to get it done, examining our own-

- having really the courage to examine our own policies here at the state agency to find out which ones are in the way and which ones are making it more difficult.

The intention of them probably, one day, was really clear, but times change and you got to revisit those. And that's really the important work. And the Predictor Model just helps us, we hope, do it at a higher level.

[INTERPOSING VOICES]

DAVID YANOSKI: OK, go ahead.

BETH KANIA-GOSCHE: We recently changed-- Paul was instrumental in this-- we eliminated the cumulative GPA as a requirement for certification-- for initial teacher certification. And we collected data on the front end and said-- we had 50 plus people a semester turned away at the door-- didn't even get in.

And there was a whole host of reasons why-- often, those career changers. Well, if you have that model, then you know 50 people's a lot. And we're not saying they're all going to get through, but they can't even-- they don't even get the chance. I like to say that I'm saving the world one teacher at a time, one student at a time, because one of my students is going to have a secondary student-- they'll have 120 students a day for 30 plus years in their career-- just one of them.

And then imagine all the ones that I have in my program. And so that's how I motivate myself to sometimes do really hard things, like have conversations with students. Yesterday I had a conversation with a black male-- going to be an elementary teacher-- with a black Muslim woman, and a student from the trans community-- three of them in one day.

And every single one of them-- I said, I know you will make a great teacher. I want to help you finish. You let me know what you need so you can finish. And it's exhausting to do that day after day after day, just to be perfectly honest, but that's what it takes, because I know each one of them is going to make a big ripple effect. And the model can be even a visual representation of that.

DAVID YANOSKI: So we've talked SEA level, the EPP level, and some things that each of these levels can do, but a lot of the questions that are coming in to the Q&A box are-- tend to be

about the SEA level and different things that can happen at SEA level. So you can both of you just discuss, what could SEAs do to really help address these pipeline issues?

PAUL KATNIK: We're exploring a lot of different things. We piloted for the first time-- it sounds weird to say it, but it's basically a teacher externship for the teaching profession. We just called it Pathways to the Teaching Profession. But we hosted a whole cohort of teachers, and we shared with them the data about our profession.

So we established the why. Why is this a problem? And we established next the role that they play. I'm just a firm believer that our students today are going to make their decisions about being a teacher based on the person they're spending all day with in their classrooms.

And we're not going to be able to do it without their help, and so we train them on ways that they can recruit students, support students, talk about the profession in ways that are going to help. And so the pilot went pretty well. We're going to do it in a second region of the state in June, and I think, at that point, we'll have the kinks worked out. And then next year, it-- hope to be doing this in every region of the state every single year.

And that's one thing. I know I saw some questions in here about credit options-- dual credit options, and can that be used? Yes, we're exploring that. How do we take people who want to be a teacher, and find ways to get them some dual credit options in high school to get them started, and hooked, and in the door right after that?

We partner with Future Teachers of America and Educators Rising-- with those chapters to try to tap into that. So pretty much everything's on the table. We're going for everything we can come up with.

DAVID YANOSKI: Paul, can you tell us a little bit more about some of the content-- that idea of working with teachers to find teachers, I think, is really exciting. Can you tell us a little bit more about the content of what you work with teachers on?

PAUL KATNIK: Yeah. There was a big session, first of all, just on the status of the workforce, and really what the data looks. And the takeaway for the teachers was, I had no idea that our workforce had these kinds of challenges going on.

They spent a whole set of time with our teacher of the year, who came from--Darrion Cockrell. If you don't know his story, he was in a gang as a kid, and he lost both his parents. And there's no reason he should have turned out successful, but he had teachers there who took care of him, and he's now been named our teacher of the year.

And so his message to the teachers are, it's you who turn around people's lives, and it's those students who then can be like me, and not only become a teacher and succeed, but be recognized as a teacher. And so we did a whole session on that. We did a session with our university folks that say, here's what a teacher ed program is. Here's what happens. Here's what preparation looks like.

And we incorporated in some teacher candidates who were-- folks who were still not there yet, but they talked about their excitement about being a teacher. And then we had each of these teachers in the cohort recruit some students of their own, and that we had a big student event where we hosted them.

The whole point was to say, we've got to make teachers understand that they're a recruiter. They're the original, most powerful recruiters, and they have to help people like state agencies and Beth and her programs-- they've got to help us here, because we can't do it on our own.

DAVID YANOSKI: Right. So I have a couple pretty specific questions. So first one is for Beth. Or Paul, you could actually address this as well. Are the teacher education programs in Missouri-- are there any online-only options, or do they all require residencies? Have we been able to remove some of the barriers of actually physically being on campus for teacher candidates?

BETH KANIA-GOSCHE: Yes, we do have online options, both at the undergraduate and the graduate level-- depends on the institution. It's much more popular at the graduate level [INAUDIBLE] institutions. I just feel obligated to speak to the broadband access, though.

Again, coming from our region of Missouri-- I will tell you, I have been out visiting schools, and I've had to print out directions because there's no signal out there-- it's just to add that perspective. And I appreciate the question, and yes, definitely want to provide access, but putting it online doesn't mean that everyone has access.

And depending on your institutional admission policies, that doesn't necessarily-- even having the degree at the graduate level, that's not necessarily accessible either. But I think we're trying our best within the constraints of our institution.

PAUL KATNIK: And Beth will agree with me. We've sure learned a lot this year-- my gosh. We've learned about the challenges that we have that we got to fix, and so that was part of our discussion this week about using the money that's coming to maybe address some of those. But we've also figured out that we can do some things in some different ways.

This is an example right now. We don't all have to meet in Denver to learn about this. We could do it this way, and it can actually be fairly effective. What's important here is, as we move forward, to take the lessons we've learned and use them well.

DAVID YANOSKI: Right. Another one for Beth-- in Illinois, we found we lose 50% to 60% of freshmen who say they plan to teach by graduation. And so they've taken some steps to try to do dual credit early on to try to keep those people in the teaching program. So are you finding similar things, and have you found anything that may be effective in mitigating that loss?

BETH KANIA-GOSCHE: Most institutions I've talked to in Missouri indicate around 30%, so that sounds a little high to me. But I would say it probably depends on the institution. And it may depend on the design of that intro course, because if it truly is exploratory, I don't necessarily know if that's a bad thing, just to be perfectly honest-- because I do want to make sure we don't go the other way and have people in the profession who don't really like kids, or who aren't interested in teaching.

It happens to me. I have 30 students. I've had four drop this semester, and most of them said they realized in my class that they didn't-- this wasn't for them. I think we need to be OK with that, but that does mean I need to go find four more students from somewhere else, maybe who are majoring in math, or physics, or something like that.

So yeah, that seems a little high to me. I was just yesterday talking with some other EPPs data assessment people, and we were talking about our rate seems to be around 30%. We lose about 30%.

We were having this exact discussion-- is, how do you be focused on retention, but also-- I will just tell you if you've had a student teacher who didn't really want to be there, that's not good for anybody. It's not good for kids, not good for us.

It's a lot of resources to get someone through who isn't going to go into the profession, and none of us want that. We also tend to look at admission into the program-- not the first course, but retention starting with admission to the program, because that usually means they've gone through one gate, and they've usually taken maybe 12 hours of coursework.

So they have a little better sense-- usually had one field experience. That gives them a better sense. I think, just personally, that's a better measure of retention is from admission to graduation.

DAVID YANOSKI: Right. Hey, Paul, we have a question for you. So going back to the whole TPM, and having this dashboard, and having this data available to you, we all could think of examples of where we put a lot of time and effort into developing in something like this, and then it just sort of sat on the shelf and was never looked at again.

How have you been able to embed the TPM in this dashboard into your daily work and develop processes so that-- to make sure that this continues to live and continues to be a part of your decision making process?

PAUL KATNIK: Honestly, David, I don't associate the metrics with the TPM itself. For me, the TPM not only informs our efforts, but it's also a level of accountability about our strategies, and did they work? So what our goal is is to make sure that the predictions the TPM make for what the workforce will look like in three years don't come true.

We want to be able to implement some strategies. We want to see enrollment on Beth's campus go up so that, in fact, we're proving the TPM wrong. We would like it not to turn out to be true. And so what it's going to do is hold us accountable to our efforts, and if what we're trying to do to try and improve the workforce and increase the workforce isn't happening, then we got to change strategies, because we can't stay on the path we're on. That's for sure.

DAVID YANOSKI: From your perspective then, in order to keep this in the forefront, it's not about the data itself. It's about keeping the problem in the forefront, and then using that data as a way of monitoring progress.

PAUL KATNIK: Yeah. It's a great measure for us, and are we making a difference? And folks have been asking in there, are you after diverse candidates or whatever? And the answer's yes, we certainly are. And so we want this to show us that, in fact, we have-- after three years of work, we've actually arrived at a place that we weren't today, and that's what's going to keep us using it is because it's about accountability of our efforts to change the workforce.

DAVID YANOSKI: Well, I want to thank both of you-- all three of you, actually, for your time today and the information that you were able to share. And for our participants, just a couple of things before we wrap up-- we will put together a recording of this webinar and send out an email when that is ready for all registered participants so that you could access that.

That'll take us about three, four weeks or so to put together that final recording. If you have any questions about anything that you heard, or any additional questions, or want some additional information, please don't-- please feel free. We want you to reach out. I'm sorry.

Feel free to reach out to REL Central. We would love to share and have some additional information for you as well. And again, if you want to see the presentation, if you want to see the recording of the webinar, any of that, that will be available on the REL Central website in, again, about a month.

Before you leave today, we will send out a link to a survey, just to give a little bit of feedback on how we did today and what you'd like to see more of in the future. We really highly value that information, and really appreciate you taking five minutes to fill that out and give us a little bit more information. But again, thank you very much, our presenters. Thank you very much for those participants for taking some time to share with us today.

I hope everyone has a wonderful day. These are big problems to deal with, and we're going to deal with them for a while, but I think, working together-- all levels of the system-- we're going to be able to figure this out, slowly but surely. Thanks. Have a great day.