Science Modeling Talks

Episode 80 - Modeling From An Administrators Perspective

Guest: Rama Janamanchi

Mark Royce (01:20):

Well, hello Rama. How are you?

Rama Janamanchi (01:23):

I'm doing well, Mark. Thank you. Thank you for having me on the show.

Mark Royce (01:27):

Oh, I'm excited to talk with you about modeling, and even though you're not a modeler, I'm excited to talk to you about your perspectives as a leader in your school and working with modeling teachers. It's really interesting to me. I don't think I've ever interviewed someone who's an academic dean at a school before. This will be a first time, and I'm excited to talk to you about your perspectives on this, all this stuff that we do with modeling. And I wanna learn, I especially wanna learn more about you and your school. So why don't we start out with you telling us, our listeners and me about your school, what your focus is. I found when I was reading about it, it was very interesting. And so share with us and our listeners what you guys are doing there at Lawrence.

Rama Janamanchi (02:27):

Sure. Lawrence School serves students K through 12, and we serve students who have language-based learning differences and attention-deficit issues. Now, typically people understand language-based learning differences as dyslexia. Like, that's the quickest way that I can describe it. And we very intentionally call them differences, but we are aware that almost everyone else calls it a disability. It's sometimes called a deficit, the whole bunch of other d-words that go with this. But we call it a learning difference because we want to acknowledge that really what's happening is that in most learning environments, our students are not able to learn. Rather than that they cannot learn, if that makes sense. It's not a physiological issue so much as it is a learning environment issue. And so we are not just a physiological issue. So, to be diagnosed with an LD, you need to have a neurophysiological issue.

Rama Janamanchi (03:38):

But by the time you come to us, our students have, when they discover the space that folds in a multisensory learning experience, suddenly now you're not limited to the one neural pathway through which everything happens. You activate all the spaces. And that allows our students not just to navigate, but to actually be successful and to feel empowered as learners. And I think that, truly like watching that difference in our kids is an amazing thing, because, at some point, no matter how strong you are, you begin to internalize the world's perception of you. But then when they come here and they notice what they're able to do -- we do all the things a typical high school does. Like I am the upper school academic dean. So I have a counterpart who works with K through six students. And on this campus, I work with students who are in grade seven through 12.

Rama Janamanchi (04:46):

Okay. And in grades seven through 12, we do curricula that is similar to what happens in a typical middle and high school. And the students are able to do it. We just provide access. So that means in our classrooms, it is very routine for a text to be heard. So as it is to be read with your eye. So visual reading and audio reading are both equally used in a classroom. And so if a teacher says, all right, it's time to go do your writing, you'll notice some kids will just pick up their laptops and start speaking into their microphone. They might use a headset and start talking in, and it is normalized because really what we're interested in by the time they're in middle and high school is can you engage in some of these higher order thinking skills rather than, let's tell you all the ways in which you cannot decode. Because they're aware they can't decode. But we are also aware that technology provides us equity, which means with the use of technology, they can do some of these things like decoding a text. Now I can start thinking about why the author said what they did, if I've not just spent a lot of my brain power decoding what the author said.

Mark Royce (06:09):

Interesting.

Rama Janamanchi (06:09):

And naturally they do. Well, I mean, these are bright young minds, and all we are privileged to do is to create spaces and opportunities for these young minds to really flourish. 'cause we do believe, that we are producing change makers. Like I know all schools believe this. Right. You can't be in education if you don't have some sense in student efficacy. But we really believe that with our students, we send them out into the world as advocates for themselves and also for others. And we do that by one, multisensory learning; two, building in structures into the classroom. For a student with attention deficit issues, one of the things you wanna take into account is they may not have heard you the first time you said it. So, let's figure out, listen, if I have it written on the board and I say it, and it turns out in the course of conversation, a peer is called on to repeat the directions.

Rama Janamanchi (07:13):

It turns out at some point you're going to hear what was said, and you will now do the task. Rather than spending a whole lot of, you didn't pay attention to me because you don't care. We just acknowledge, listen, there are a lot of things that are pressing in on your attention. The things that are important, we're gonna provide you access in multiple modalities. And so I think as we talk, you'll hear me using words that for us are very normal. Things like executive functioning, the access and multiple modalities, multisensory learning, those are all things that are normalized in our school. It's the expectation that all teachers provided. It's the expectation not just from the parents, but from us as members of that community.

Mark Royce (08:04):

Mm-hmm <affirmative>. That's awesome. That is such a, a wonderful service that your school is providing for often overlooked segment of our student communities.

Rama Janamanchi (08:19):

Right. I underestimated, I think more than overlooked, often underestimated and

Mark Royce (08:25):

Uhhuh. Okay. Yeah. Yeah. So it's a full high school. Are you, and so are you fully integrating science curriculum as well?

Rama Janamanchi (08:35):

Oh, yeah. Yeah. Yeah. So in seventh grade, for instance, students do life science. Eighth grade, they do earth science. Ninth grade, we do physics, physical science. Then they do bio, chemistry, physics. We offer AP physics for

students who are inclined. So it's a traditional high school curriculum. It's genuinely a matter of how do we provide the access.

Mark Royce (09:00):

The modeling teachers in the modeling community I'm aware of are primarily focused on the sciences. Right. Yeah. And so I'm curious about how you first discovered the whole process or the whole idea of modeling instruction and the methodologies used there. And talk to me a little bit about how it's being integrated at your school.

Rama Janamanchi (09:24):

Sure. So I first heard about modeling because of our director of the high school, Joseph Timmco. Joe had, we were chatting, it was almost like our very first conversation. We were doing a tour of the building. Joe and I came into our positions the same year. So I became upper school academic dean, the same year as Joe became director of the high school. And so we were walking around the building, and as we were walking past the science labs, we were talking about our kids and the opportunities for them. And Joe said, you know, we should really look into modeling. We should really look into how we can bring modeling. And as he described what happens in a modeling classroom, his excitement and his, the transformation he was describing really got me. And I was like, all right, we've gotta go look into this.

Rama Janamanchi (10:21):

We have to see how we do this. And so we started. He connected me to the AMTA website, and I went and started looking for, what are these opportunities? Like, how do we get our teachers out for professional development? Because clearly there was training required before you could start. So we started looking into it. And in that first year, we also visited a sister school of ours. So we're not the only school that serves this kind of a population. We're part of an organization called ALDS, the Association of LD Schools. And so there is another school like ours done in Columbus called <inaudible>. And we visited them and we noticed in their science classroom, they were doing something very similar to modeling. And we're like, and Joe said this, this. This is what I was telling you about.

Rama Janamanchi (11:13):

You can see it in action. And again, it truly, Mark, I think for those of you who've been doing modeling forever, my surprise will feel a little Of course. Why wouldn't it be, why would be any different? But I've been in traditional classrooms, I studied science in traditional classrooms. To see a room where the teacher's posing a question, but there are multiple answers. And the students are listening to each other, learning from each other. They are making educated guesses and taking estimates and providing, going from the hypothesis to the beginnings of what could this really be? Forming a theorem, right. Forming an idea and understanding to see that happen in a high school classroom with students who also had LD like our kids do, I was like, oh, wait, this, this is it. This, this is what we need.

Rama Janamanchi (12:15):

Because the confidence and the pride with which a student can approach their learning. That magic is just, is incredible. To see that in a student is incredible. So we were like, all right, this is it. Now we just have to figure out how do we get them into modeling? What do we do, <laugh>, where's the training? And then of course, who's the teacher? Right. So our first year, I think when, I was earlier in my notes to you and in my email I told you that I feel, just as you said, your first time interviewing an academic dean, I felt, um, well, felt a little like a fraud. I'll tell you because the people doing the real work are the people in the classrooms, Joe, who had the idea. But my teachers, the teachers in our science department who are doing all of this work, I think they have made the difference for us as a school.

Rama Janamanchi (13:15):

And the first of those teachers who got trained is Nate Thompson. He teaches both physical science in the ninth grade and physics in the 12th grade for us, the AP physics and the physics class. And he's a phenomenal teacher.

He's been doing exceptionally well. He had already been teaching with us for about close to 10 years, nine or 10 years. And we approached him with, would you be willing to go do this, go for this PD that seems to completely transform how your classroom would work? And it wouldn't have taken more than a heartbeat to say no. I'm good at what I do. You don't have any problems with what I do. The kids seem to be doing fine. I'm doing multisensory learning. They're up and about. He could have said any number of things, but he said yes.

Rama Janamanchi (14:08):

And he attended the training at Baldwin Wallace, and he came back from the training. And of course, if you'd meet Nate, you would know that he is a very, very relaxed, very quiet person. But when he came back from that training and he was presenting to faculty, his enthusiasm and his appreciation of what this methodology could do for his kids... That confirmed to me because in the hands of an experienced good teacher, someone who's committed to student wellness, first, to hear that praise about a new methodology. That said the seal for... Okay, we're onto something here. And then there's a whole year of Nate trying to figure out how do we build this in? Because I know I talked to you about the methodologies we use, but those are all research-based methodologies that we know work for our kids. And because Nate is as good as he is, he was also thinking about how do I not lose some of these things that I do?

Rama Janamanchi (15:15):

We do structured vocabulary instruction. It's part of how our kids learn. How do we fold that into, no, it's gonna be inquiry first. Mm-hmm <affirmative>. Like I need to give the kids the vocab in order for them to have the inquiry. But then the methodology says inquiry first. And he truly worked out the kinks for himself. And so a lot of Joe's role and mine was to be cheerleaders to say, okay, we'd like to see you do this. And what is working, what is not working? And is it a first year rollout issue or is this something that you need more help with? Do you need more time to go reach out to the cohort that you worked with? All of which I think that's why I said this, that we are happy with it, that it is successful in our school, is because of our team.

Rama Janamanchi (16:09):

Yeah. To have teachers who are committed. We hired on a chemistry teacher last year and told her when she was being hired, you're going in for modeling right away, <laugh> to teach chemistry. You're going in for modeling. Our biology teacher, the same thing. And again, a phenomenal team because they said yes. Yeah. And they went, that's awesome. And this year they've been rolling it out. They've been figuring out how do we do this? How do we accommodate? And what I asked them and getting ready for this interview, tell me an aha moment. And they said, you know, the differences between first semester and now. First semester, the group in my chemistry classes, in our chemistry right now, that's our juniors. Right. They didn't have Nate with the modeling. They had Nate in the earlier version of our curriculum. Still physical science, but not modeling mm-hmm <affirmative>.

Rama Janamanchi (17:02):

And so this is their first encounter with modeling. And they hated it. <laugh>. They were like, what do you mean ask questions? What do you mean I have to talk about this? What do you mean I have to look at this and I don't like it? Just tell me, gimme the notes. I'm good with the notes. Like, and she pushed through and said, no, this is how we do modeling discussions. This is what you do at the white boards. Here's what I need to see. Right now, she says, the transformation is incredible. Because now they're ready for their whiteboards. When they come up, they're like, okay, and I have a question for the other team, and this is what that question's gonna look like. And oh my God, remember when we did this? Remember you taught us that concept? Isn't that the same thing? So they're connecting the lecture with a later modeling session and building it together. And she says that kind of organic synthesis is not something you expect in a year. You hope for it. Right. And you work towards it. But it's a privilege to be able to see it in a year. And I know a big part of it is the methodology. And I think kudos also to the teacher because she has been trying to implement it with fidelity. And that's helped us.

Mark Royce (18:14):

Is this your chemistry teacher?

Rama Janamanchi (18:17):

Yep. This is my chemistry. Yeah.

Mark Royce (18:18):

What grade year is she teaching?

Rama Janamanchi (18:20):

She teaches 11th grade chemistry. Okay. Okay. 11th grade. So it's chem one in the modeling curriculum that right. Yeah. The same with the biology teacher. She had a training when she was in grad school, but she did modeling physics

Mark Royce (18:36):

mm-hmm <affirmative>.

Rama Janamanchi (18:38):

And so bringing it here, she said, okay, I know the methodology, but to fold it into biology, which is a different curriculum. That's taken a bit of a lift. And she's been working towards it. And the same with Nate. I mean, this is what he was saying. Like every year as he rolls it out, he can see one, he himself is getting better. He had a phenomenal instructor. And I keep telling Nate this, his instructor's words are something that Nate held onto, but I held onto, which is your first year, you're gonna suck. You're just gonna suck less as you go, as you keep going. And I'm like, I love that. I love this idea. Permission to fail. Mm-hmm <affirmative>. It will get better. Yeah. You just have to persevere. So Nate's seeing both his success, but seeing also room for his own improvement and adjusting in the classroom as he goes. Ind I think in that sense, he's leading that department to be able to say, okay, this is what I tried. Here's me trying something.

Mark Royce (19:40):

Did your biology instructor go to a biology modeling workshop?

Rama Janamanchi (19:45):

She will be. Now. And that was one of the, so when, when I said, what could we have done better? That was one of the things they said it would be helpful to do the curriculum that's directly connected to what I'm teaching rather than seeing the methodology. And then I have to try to adapt it. It would be better if I could that.

Mark Royce (20:06):

So in biology world, it's a little different approach than in chemistry or physics.

Rama Janamanchi (20:11):

Right. And so we are excited mm-hmm. That she's gonna be able to go and pull the materials and actually use and see the materials that we'll be using. We're also a host site, which is a pretty cool thing.

Mark Royce (20:25):

Yeah. I wanted to talk to you about that. I just wanted to mention, it seems it's really cool that your staff, your teachers are this invested and enthused about learning in the modeling world. It's awesome. It's really cool.

Rama Janamanchi (20:42):

Yeah. I think I am truly privileged. This is a team of learners. And when you have someone with, when you have people with that mindset, they model the behavior to the kids, right? It's one thing to teach, oh, let's come in with a positive attitude. But when you have a teacher who's also modeling it in just their approach to learning. That's a phenomenal thing.

Mark Royce (21:06):

Yeah. That's great. So you mentioned it, and I wanna pursue this. Tell me a little bit more about what got you interested in hosting modeling workshops? 'cause I know that's coming up. And you can maybe tell us when the first one you're gonna do.

Rama Janamanchi (21:23):

Sure. We're doing both concurrently. We're hosting middle school science, and that's gonna be June 15th through the 26th. We're also hosting middle school bio. That's gonna be June 16th through the 26th.

Mark Royce (21:38):

And that's in collaboration with AMTA?

Rama Janamanchi (21:42):

That's right. Okay. It's through A-M-T-A. I found out from Ine that we also have a couple other sites open up in Ohio, specifically in northeast Ohio. And I'm excited about that. I know she is too. But I think it's wonderful. So you asked why did we decide to host it? The year that, so this is last year we were looking for, because Nate had such a great experience at the physics one, we knew we wanted an in-person training for our newly hired chemistry and bio teachers. Well, there weren't any available, or there was one available. And it closed because not enough enrollment. I couldn't figure out what it was. I was like, okay, this is, this is silly. We're committed to it. We have a beautiful campus. We truly do. I don't just say, because I work here.

Mark Royce (22:39):

Yeah. I've seen pictures online and, man, it is gorgeous.

Rama Janamanchi (22:44):

I know. And it's a phenomenal place. Why can't we host it? And so I asked permission from our head of campus, and she was like, yeah, if we can get them in, we need to figure out the timing. So we got into conversations with Sue Ray. That's where it started with Ray, and with Sue, we had our first call and then Ine joined in as well, and that, so I've had continued conversations with them. Yeah. And those have been lovely because I said, I am new to this whole thing. I am super enthusiastic. But I am new. I don't know what to do. I know that it's important that we become, that we have the space for our teachers. What do we do? And so we've been walking this together, the leaders for each of those workshops. They've been generous with their time to be able to say, okay, these are the things we need. Here's how you would do it. Here's how you set it up. And I think all of that has been helpful. And that's, so I'm excited. I'm truly excited about the people who've already reached out to say, Hey, we're interested. We'd like to do this. And I'm hoping that we get enough people signed up so we can have the workshops happen.

Mark Royce (23:58):

Yeah. Yeah. You know, you know, we are so enthusiastic about spreading the word about modeling instruction and getting it in more and more teachers' hands. Right. Yeah. Well, one of the first hurdles for that, or I shouldn't call it a hurdle, but, but one of the first steps in getting modeling introduced in new areas is through administrators like you. And so I wanna ask you, what would you say to another administrator who's not familiar at all with the modeling approach? What would you say to them to get them to be interested?

Rama Janamanchi (24:38):

So many things I could say. One, this is the best investment in your students' education that you could make. Because there is an element of a student empowerment that leads to, we know this, right? Research out there about all the reasons why test scores improve is when students are engaged, active, they retain better. All the information that they're learning for all of the statistics that we could pull. Those are definitely some of the reasons. But the transformation in a teacher, that also is a reason to invest in this kind of PD. Because in the end, it's about a teacher realizing, wait, I don't have to have all the information, that the kids are gonna ask a question and I'm gonna toss it back to them and watch discovery happen. And there's nothing that beats the jaded months of February, January in the cold of Ohio, <laugh> then watching a little bit of curiosity and discovery in your classroom.

Rama Janamanchi (25:45):

Right. I mean it, they're dreary months for us, but the learning is still happening. And you're there and you're watching it. You're watching the kids struggle, but not in an unproductive, everybody's trying to get somewhere, but in a very productive, I'm trying to understand what's happening here. I'm trying to think like a scientist. Right. And thinking like a scientist often means it's that I know I, I was telling you about Stuart Feinstein, but he has a TED Talk and he talks about so much of the time, it's asking these hypothetical questions and pushing really just the boundaries of what we don't know. But modeling, I think creates, and I know it cannot have been all natural. It's clearly been structured to be that way, but creates, what feels like a natural organic space in which you ask those questions for which not everyone has an answer.

Rama Janamanchi (26:42):

You're not trying to figure out what's the answer in the teacher copy. Right. You know, you're, you're not trying to figure out what does the teacher want me to say? You are genuinely engaging with the idea, with the concept. And you may not have the vocab, but when the teacher provides you that vocab, you're suddenly like, oh yeah, that's a better word for what I'm trying to describe. And now you've attached the vocab in your mind in an organic way to the concept better than the Frayer model or whatever other method you wanna use for vocab instruction. You know, I think for all of those reasons. So authenticity in the classroom, authentic learning for the students to create a culture of learners among your teachers. For all of those reasons, I would say invest in the PD. It is worth your teachers' time. I don't think our teachers are outliers in how enthusiastic and empowered they feel in the classroom with the methodology. I mean, at least based on all the modeling teachers I've been talking to, it feels like I was listening to Janelle Hollingshead, that was the previous episode. Mm-hmm <affirmative>. And it's the same thing. It's that moment where you suddenly go from, I've done this, I've done this, I've done this, I need something different and new, and you're here. But the methodology is such that it's always going to be new. 'cause you're always gonna discover something better within the kids and what they need. Mm-hmm. And before you know it, you've sort of internalized that mindset. Right?

Mark Royce (28:16):

Yeah. Yeah. Yeah. That's great. So that is really, really great. The workshops that you're hosting, do you have... I just would love, I know this has a, this episode will have a life of its own over time. But for right now, what are the dates that you guys are planning for your workshops?

Rama Janamanchi (28:38):

Sure. We are planning for the middle school science workshop will be from June 15th, 2026 to June 26th. 2026. It'll be from 8:30 in the morning to about three in the afternoon. For the biology workshop, we are meeting from 8:30 in the morning to three, but then it'll be from the 16th of June, 2026 through the 26th of June.

Mark Royce (29:09):

Okay. Cool. Now, I know this information is available for our listeners, if you're interested or you know, someone who might be, if you go to modeling instruction.org, you can get all this information about all workshops that are

coming up. So

Rama Janamanchi (29:27):

Yes. And some lovely pictures of our campus too. <laugh>.

Mark Royce (29:29):

Yeah. Oh, good. Well, on the science Modeling Talks website where we have this episode hosted or posted, we'll also have some information, like we'll include the link to Lawrence School.

Rama Janamanchi (29:45):

Thank you.

Mark Royce (29:46):

Yeah. So people can check out Lawrence School. That'll be really cool. Yep. So you've been involved in education for how long?

Rama Janamanchi (29:58):

Well, in high school education, this would be my 11th or 12th year. Prior to that, I was teaching college courses.

Mark Royce (30:08):

You were teaching in college? Okay. So talk to me, just share with my listeners, our listeners, the your best tips for the teacher in general. Okay. Your best tip. Sure. For teachers, it doesn't have to be modeling related, but, but, what's your best, you've been at this for a while.

Rama Janamanchi (30:32):

Well, I have, I know <laugh>. My best tips: believe in the kids bottom line. Believe in the kids that they can do difficult things, be curious about what they can do. I remember growing up with, you know, and, and we all do, there's that generational, oh, the next generation, whatever is the next generation. And how they can't do things that we used to be able to do. And I'm keeping it general because you can literally plug in anything. Oh. You know, my dad used to say, why don't you guys have your log tables in your head? 'cause he used to, his schooling, he had to memorize the logarithmic tables. Because we have scientific calculators. That's why we don't have,

Rama Janamanchi (31:20):

So you can go with that or you can believe in the kids that they can do difficult things, so don't drop the bar. Don't sort of, and that's, you know, we are surprised by what our kids can do. We don't drop the bar. We hold a very high standard. We just build the scaffolds they need to get to that standard for what they can do. Be curious. Listen to the kids, listen to what's happening, but listen also from a non-judgmental space, because that will help us. And that is a modeling mindset. This whole, don't go in with a preconception, but it's good teaching. I mean, that's, I think a lot of why modeling works is because it's good teaching.

Rama Janamanchi (32:04):

Listen to what they have to say, listen to what's happening around the world. We talk so much about the ways in which AI is scary, but if you start listening, the teachers who are trying to navigate scary with wondrous, they're discovering answers. There is wonder in this. And there are things that we can do. Yes. We need to be careful. I think we need guardrails. But we can navigate that. If we retain that curiosity, we're willing to listen. So I think those would be my two big tips. You said one and I gave you two.

Mark Royce (32:43):

No, those are great. Those are, that's really, really great. Well, Rama, it's really been great talking with you. And I am so excited about what is happening at Lawrence, at your school. It's very exciting and very encouraging. And I think it's a wonderful example to other schools. And I hope it will be a great inspiration to administrators and teachers alike. As you know, people get exposed to what you guys are doing there. The fact that you're adopting modeling is makes my heart warm. And I know it's gonna be very meaningful to the modeling community, is very interesting about the student population that you serve. That you guys are able to introduce the modeling techniques into those learning environments. I think it's wonderful. And I wanna just say thank you. Thank you so much for taking a little time to share with us today. It's been great.

Rama Janamanchi (33:54):

Thank you so much, Mark. It is a privilege to serve the kids that we do. We're grateful to them. If you hear inspiration in my voice, that comes from the kids we serve, they work extremely hard. And are very, very brave about things that I don't know that we are as adults. But I'm grateful for the time you've given us. And I'm excited. I hope more people sign up for our workshops this summer. We're happy to have them here.

Mark Royce (34:25):

That'll be awesome. Thanks again.

Rama Janamanchi (34:28):

Thank you.

Mark Royce (34:29):

You have a great day.