A GPS for Learning with Prasad Ram

Leading Learning Podcast Transcript for Episode 333

Prasad Ram: [00:00:00] Google Maps will not work if there is no GPS signal because it says, "I can't locate you." But, if you think about all the learning, including all the continuing education and adult-related learning and so forth, we barely have an understanding of who the learner is. But we are happy to tell them that we'll take you to your destination.

Celisa Steele: [00:00:23] I'm Celisa Steele.

Jeff Cobb: [00:00:25] I'm Jeff Cobb, and this is the Leading Learning Podcast.

Celisa Steele: [00:00:33] Welcome to episode 333, which features a conversation with Dr. Prasad Ram. Pram is founder and CEO of Gooru, a nonprofit research and technology organization providing Gooru Navigator, a GPS for learning. Pram and Jeff talk about Gooru, its app, and the philosophy behind the app. They also talk about education as a fundamental human right, the inherent complexity of learning, the need for education to evolve to keep pace with change in other areas of our lives, and the need to know where a learner is in order to help her on her learning journey. Jeff and Pram spoke in October 2022.

Jeff Cobb: [00:01:24] And I'd love to get you to tell us a little bit more about the work that you're doing at Gooru right now. I know that's your current focus, so I'd love to hear about that. It'd also be great if listeners could learn a little bit more about your career before Gooru because you really have a very rich career that led you to where you are right now. So could you share a little bit of your background and then maybe a little bit more about what you're now trying to accomplish with Gooru?

Prasad Ram: [00:01:50] Yeah. I'm formally trained as a computer scientist. I have a PhD in computer science. I worked at major institutions like Xerox PARC, which is the research center, or Yahoo, which was a premier provider in those days, and then at Google and have led the development of large systems that many of you most likely use today, like build the engineering platform for all of Yahoo Media or led a large development team on Google Maps,

developed Google translation technologies, and so forth. So my background is more as a computer scientist and a product innovator kind of background. I came to education with a fresh pair of eyes saying, "So why haven't we actually moved one thing in education while the rest of our lives have turned upside down?" We no longer drive without Google Maps. And for many of you who are as old as I am, you can even wonder, "How did we manage to get around?" We used to go to all kinds of different cities and different countries without any kind of live navigation support. Whether it's Uber or the way we order on Amazon, everything has changed. But the way we learn, whether it's in continuing education, professional development, or K-12, is more or less the same. We have courses. Yeah, we have videos, little more videos now than just slides, but that's about it. So that was my quest saying, "Hey, what can we do to bring the elegance of Google Maps to learning?" Where the system knows what you currently know. You set a destination, and then it provides you a route to your destination and re-routes you based on your performance. So that's what we have put together at Gooru.

Jeff Cobb: [00:03:59] I can remember, back when I first got involved in e-learning, one of the common things that people would say is that if somebody fell asleep in the mid-name-your-century—18th, 19th, or go back to 12th or earlier—and woke up and looked around, they'd see just so many things that were different about the world that would blow their mind. But, if they walked into your average education situation, it would look exactly the same. And you could say that now there's Zoom, of course, so everybody's having to do so much on online and on Webinars. So maybe the modality is a little different, but the practices really haven't changed. We really don't seem to be taking advantage of what we could be with education, and it's not a trivial thing. I know that your work, gathered from reading about your background and what you're doing, that you're really driven by a social justice perspective on learning and by this idea that education is a human right. So can you say more about that? And can you also say more about why you hold those beliefs, and how you came to hold those beliefs about education?

Prasad Ram: [00:05:11] Yeah. Like your first comment about the Rip Van Winkle story, if you woke up after several centuries, you still see education hasn't changed. And your comment about Zoom. What we do with Zoom is still we have a teacher who sits in front of the camera and under 30 students who sit in their homes now. And it's the same model of education ultimately. And there is a reason why we stick to that, which is learning is incredibly complex. So, if you come up with a better idea for learning, the chances are it's not going to work. At least it's not going to work rather quickly. So we are better off just falling back to something that we know, which, true, doesn't work. But that is the status quo. And clearly, education, the way we do it doesn't work either. But that is the status quo, right? And so we are better off being in

status quo than trying something else that clearly is no better. So we can introduce game-based learning. We can do project-based learning. We can do all kinds of other inquiry-based, and we can do small-groups instruction. We can try all of that. All of that works in some context, in some limited environment, with the right level of support and stuff like that, which is typically not available to the broader audience. And this is where we prefer to fall back to the thing that we are used to.

Prasad Ram: [00:06:50] Now to your other question about social justice and education as a human right. My question when I was at Google was we are incredibly good about building all these technologies that have changed lives and the livelihoods for people like us, where all of us now hail Uber. We order on Amazon. We have Alexa or Apple watches and so forth that run our lives right now. If you look at all these social issues, whether it's poverty, global warming, women's rights, education, things haven't changed much. We are still fighting the same battles, or the Iranian women are fighting the same battles that has plagued that community for centuries. And so we see the same set of issues over and over again at the social front while, on our lifestyle and livelihood elements, things have transformed quite dramatically. So that's really where my quest was. How do we use the technology, use the tools and everything else that we have to solve these challenges? And now when I look deeper into what these challenges are, I could convince myself or distill it down to saying, hey, if we tackle learning, somehow that would in turn tackle all other issues or empower people to tackle all other issues, if we addressed learning for them.

Prasad Ram: [00:08:32] So a group of women who are learning well are likely to assert their rights. People, community that is learned is likely to be more environmentally conscious and supportive of the environment. So whether it's health care and all of those things, the correlation between learning and outcomes in those spheres is very high. So I convinced myself that learning is at the core of social justice. The challenge with learning, however, is—unlike the technologies that we generally use in every other realm where we are solving complicated problems, like in Google Maps or coming up with a vaccine for COVID and so forth, we're solving very complicated problems. But the beauty about those problems is that you can scale through the application. Once you figure out one vaccine that protects one person, 10 billion vaccines will protect the rest of the planet and by just manufacturing 10 billion of those. Now, that's true about everything, whether it's the vaccines or budgets, whatever you're manufacturing, you scale through replication. But the challenge with all of these social challenges is what works for one child of yours does not work for the second child of your own, so it does not scale through replication. And these are incredibly complex systems that don't

scale through replication. So my interest was how do we leverage technology, technology and the community to together tackle these kinds of problems.

Celisa Steele: [00:10:23] At Tagoras, we're experts in the global business of lifelong learning, and we use our expertise to help clients better understand their markets, connect with new customers, make the right investment decisions, and grow their learning businesses. We achieve these goals through expert market assessment, strategy formulation, and platform selection services. If you are looking for a partner to help your learning business achieve greater reach, revenue, and impact, learn more at tagoras.com/services.

Jeff Cobb: [00:10:58] Basically to solve all of these other larger problems that we obviously have quite a few in the world right now, some that could really change or even end the world, in order to solve those, learning is the path. So we have to be able to empower as many people as possible to learn what they need to be able to understand and do in order to tackle these problems. So we shouldn't be withholding learning from anybody. That's the social justice perspective of it. But then there is this complexity perspective that you're talking about that goes to the scalability. And, if I'm understanding correctly your perspective on it, that complexity is really inherent in…individual human beings are different, and they find themselves in different contexts. Those alone are just two huge variables. And of course there are all sorts of other variables. So this led you to—or I'm making the assumption this led you to—the idea of Gooru and developing what you've described as this Google Maps for learning, as a way to navigate this set of issues, to help the social justice issue, to tackle the complexity issue. Can you say a little bit more about what Gooru is? And then how does it actually work for the different types of stakeholders who would be using it?

Prasad Ram: [00:12:10] So one comment before that is the point you made about the complexity of who the learner is. Learners themselves are diverse, but, if you think about learning, your understanding of how to solve equations is based on your motivation, your self-confidence, your grit and perseverance, and all of these other elements, not just about your understanding of algebra or something of that kind. That's almost the less significant part of it. It's more complicated because of all these other elements. Do you feel a stereotype threat? Do you feel completely demotivated to learn this topic? And so forth. Then how do you overcome all of that stuff? So that's why it's an extraordinarily complex problem to tackle. Now, the idea of developing a GPS for learning is that you have to start by understanding who the learner is. Your GPS will not work if it has no signal. It says, "No GPS signal." Google Maps will not work if there is no GPS signal because it says, "I can't locate you." But, if you think about all the learning, including all the continuing education and adult-related learning and so forth, we

barely have an understanding of who the learner is. But we are happy to tell them that we'll take you to your destination. And that's the motivation the system has built in saying, "Hey, I don't know where you are, but I'll take you to the San Francisco airport. I know where you are at a very high level"—somewhere in the United States or somewhere in California, something at that level.

Prasad Ram: [00:14:03] If I know you are a 3.5 GPA or A-grade student and stuff like that, but I'll take you to a particular specific destination now. So we build courses, curriculums, textbooks, videos, everything about the destination without ever knowing where the learner is. And when I say know where the learner is, it's not just about their knowledge but also about their abilities, also about their mindsets, also about their community engagement and their sense of worth. What we are seeing is that without understanding the learner, you will never be able to successfully get everybody to their destination. And that was the crux of the problem that we had to solve. But once I know where you are, then, if we empower you to set your destination, you can become a senior product manager. You can become a cybersecurity expert. You can become a curriculum coordinator or electrician or whatever you want to be. You can set whatever destination you want. Then we'll give you a route that takes you to a destination and reroute you based on your performance. So route based on profile, laid out based on performance, everybody gets to their destination every time. Now, if we can put that together, then we believe that we would have honored the human right to education.

Jeff Cobb: [00:15:27] And two thoughts came to mind as you were speaking there. One is that of course we've known that we don't always do what we should with this knowledge that prior knowledge is so important to learning—as you're saying, understanding where that learner has been, is coming from, where they are right now. If you don't understand that, then it's very difficult to present them with the opportunities that they need to move forward from there to reach whatever destination they're trying to reach. And it also clicked with me, and I don't know why this hasn't clicked before, it should have, but we do a lot of strategy work, and we feel like the key to strategy is to understand the situation of the organization. You have to know where they are, what their context is. Diagnose that before you're really able to say, "Here's how we move forward to reach this better future state." And same thing, you have to be more strategic about learning and really understanding where that learner is. So Gooru is basically an app. How does somebody actually use it? And you can download this. I've downloaded it on my phone, and I've spent a little bit of time with it, but I'd love for you to describe it. If somebody is going to go get Gooru and start using it, what does that look like? What are the mechanics of it?

Prasad Ram: [00:16:39] Yeah. From a learner's perspective, yes, Gooru is an app, but, as we just touched upon this earlier, learning is complex. So it's not just like Google Maps in the sense that you just get directions, and you follow directions, and you'll get there. Learning requires you to be supported by your teachers or instructors, by your mentors, and by the leadership of your organization, and everyone else. So that's how we tackle the complexity of it by saying that the solution for you will actually be not only supported by the system and AI and all of that stuff that Gooru is able to do, but also Gooru is able to engage all of the other stakeholders who can coordinate their support of you as the learner. And so that's very central to how we are able to tackle this challenge. Now, specifically from the learner's perspective, yes, it's an app. You download the app. You set a destination. It immediately sees, understands where you are. And we have made it simple enough that you don't even have to take a diagnostic. You can just say, "I'm a fourth grader," or "I'm a fifth grader," or "I'm a software engineer in this company," and so on and so forth.

Prasad Ram: [00:18:01] So once you establish, give it some information, it gives you an approximation of who you are based on all the data that it already has in the system. And then, as you are on your learning journey, it is continuously introducing diagnostic questions so that, as you answer them, it refines its understanding of who you are and tailors the learning pathways accordingly. Now, Gooru is primarily just the app. To take the Google Maps analogy, it's like the Google Maps engine without the maps data or the atlas. Now that's not very useful to have a Google Maps engine without the atlas. So what we have done is created an environment where every organization can come in, provide their content, and make the Google Maps experience work for their cohorts. So, basically, how do we unlock the supply of all of learning? Learning, as you and everyone knows, is extremely dynamic. And, since our definition of what we want to learn about COVID or what we want to learn about cybersecurity, about metaverse or anything keeps dynamically changing on a daily basis, so it's not like maps where it's rather static at some level. The amount of change is 1 percent a year because the roads don't change too much. And it's extremely vast. Learning is extremely vast. Basket-weaving is different from deep-sea welding.

Prasad Ram: [00:19:46] So how do you bring all the experts in each of these areas, which there are, who have good content, who have good understanding of how to learn that concept or set of concepts, to provide the learning activities so that every learner can engage in any journey that they want. So we have done this initially for U.S. K-12, and we have organized enough content so that can happen. But now we have over 30 partners in skills training and professional development who have brought in courses for organic compost making or soft skills or leadership and entrepreneurship or teacher professional development and so on, so forth, so

that we have fairly broad areas of learning that can happen. And we have shown that this technology that we have put together is applicable in all realms.

Jeff Cobb: [00:20:45] To carry on with the Google Maps analogy a little bit, as you noted, road map data tends to be relatively static, but it's not completely static. It changes, year in and year out, even day in and day out as there is road construction. Google reports traffic in real time when the roads are clogged up. So the system does seem to learn and evolve and get better and better at what it's doing. I'm going to make the assumption that the same is true about Gooru, that you've got artificial intelligence and/or machine learning running under there and that the system is getting smarter over time and better able to understand a learner's situation, better able to guide the learners based on what it's seen other learners do over time.

Prasad Ram: [00:21:24] Yeah. And, look, more sophisticated than what is required in the Google Maps context because, for example, you may find videos boring, but you may like interactives. You like playing games, working with simulations and stuff like that while I may be comfortable with videos, and someone else may like solved examples, solved problems, to review solved examples, and that's how I learn. Now, what Google is able to do is to dynamically understand who you are as a learner, not just about your knowledge and proficiency but also about your preferences, your portfolio, understand who you are completely and leverage that in personalizing the pathway for you. Which the extreme Google Maps analogy is to say, "Hey, if this person doesn't like to pay tolls or likes scenic roads or highways and stuff like that, we'll provide them the appropriate pathway based on their preferences."

Jeff Cobb: [00:22:38] This is an open source platform if I understand correctly, so opening up the possibilities for others to be able to adapt it but also to interface with it, probably more importantly. How does it interface with things like traditional learning management systems or learning content management systems, which are part of that traditional landscape that maybe hasn't been working as well as it could have in the past? Does Gooru interface with those, and what possibilities does it being open source open up?

Prasad Ram: [00:23:12] The open source is less important in the sense that what you need is clearly APIs, well specified application programing interfaces, that makes Gooru Navigator completely extensible so you can add new things and totally interoperable. So this has to be the core. If you take Google Maps, if you come up with a coffee shop, it shows up on Google Maps. If someone else comes up with a new train schedule, Google Maps gets updated with the train schedule. Or, if you came up with a new walking pathway, it gets updated on working on Google Maps. So what we have done is made sure that Gooru is completely extensible and

interoperable. So, if tomorrow we are seeing a lot of shift in the direction of game-based learning and the idea of exploring career opportunities in the metaverse and things of that nature, so now, yes, people, if they build the metaverse exploration experience, it can integrate with Gooru Navigator. Then with all the existing systems, a variety of assessment systems, learning management systems, e-learning systems which provide content-based experiences and so on, we interoperate with all of those, and there are industry standards, and we adhere to that, and we have very well specified APIs, and these systems can interact with that. Now, the core of Gooru Navigator, not all of Gooru Navigator, is open source. So that way we allow researchers to come and work with us and test out different algorithms, test out different principles of learning and how that can be leveraged in generating personalized pathways and so forth.

Jeff Cobb: [00:25:03] Right. Thank you for that distinction. Obviously, the APIs are going to be more important to the extensibility and integration, but I think the fact that the core is open source and that other people can have some influence and do some work on that is also extremely interesting. So I'm wondering—we've been skirting around the edges of this as we've been talking. In a world where everybody has adopted Gooru and is using Gooru, the learners, the organizations that are helping to lead learning, the facilitators and instructors who are providing some of the content and helping to guide the experiences, what does lifelong learning look like in a world like that? Is the social justice issue solved? What's the outcome if we really get this right?

Prasad Ram: [00:25:53] The ultimate outcome is the inequalities in the world will reduce quite significantly. As, otherwise, the world is set up so that things move more to a technology-enabled world, certain people get more advantaged, certain people get more disadvantaged, and the gap keeps widening. The inequality keeps widening. And now, if the people who are traditionally underserved are able to learn continuously and adapt themselves to the changing environments, then income inequality will drop because of learning inequality dropping and so forth. So we move closer towards social justice. Now, in a world where lifelong learning is an important thing because we partitioned learning into early childhood, K-12, higher education, skills training, professional learning, and so these are all artificial, and grade five, grade six, grades. These were all done for some convenience, and actually it has no basis in anything because the way the student learns is I may be a fifth grade student who is doing math at seventh grade level and have my knowledge of English in third grade level, but my creativity would be at fifth grade level, and my communication skills could be at whatever other level that we want to define and so on. So the idea is that nobody is slottable. Everybody is so individualistic. Everybody is so unique that everybody just has...it's like Google Maps.

Prasad Ram: [00:27:40] Google Maps doesn't pass judgment based on where you are. It says, "Hey, wherever you are, we'll take you to wherever you want to go." We're not going to say that we are 30 miles from the airport or 300 miles from the airport, then the person who is 300 miles must be more stupid. We just say, "Hey, you happen to be 300 miles. We'll take you to this airport. You are also 30 miles from somewhere else. But, as far as this airport is concerned, you are 300 miles away, and we'll still navigate you." So that's the approach that we need to take is to...we see lifelong learning is always about the learner. And the learner is where they are on a variety of dimensions. They're all over the place. You don't want to slot them and say they're fifth grader or seventh grade or whatever. This is where the learner is, this is what they want to learn, and let's find a navigation path for them. Now, we slotted them into fifth grade and sixth grade and all that stuff because it somehow made it convenient for us to manage large volumes of students. But, moving forward with that, technology is all stepping up to support this. We don't need to do that anymore.

Jeff Cobb: [00:28:55] I'm always like to take advantage of having a guest like yourself on the show to ask how you approach your own lifelong learning, and, particularly because of who you are and your background, I'd love to know what role technology plays in supporting your own lifelong learning.

Prasad Ram: [00:29:13] Yeah, in fact, all of us as adults are lifelong learners, and we really enjoy learning since you learn about COVID one day, the next day you're learning about racism, and the third day you're learning about elections. So we think about it as we have a learning companion that is seizing the moments that surround us to support us with learning. And you learn based on, all of a sudden, somehow UK is shifting their prime minister after six weeks or something. So all of us are interested in how parliamentary systems work and trying to understand how they elect their leader and so forth. So we are learning based on what you know, and we learn enough to understand how U.K. chooses its prime minister versus how U.S. picks its president. And that's no different in my case. And, since there's constantly a lot of technical things that we need to learn about, everybody is trying to understand what this metaverse is supposed to be and what is going to change because of that. Or all of us have heard about cryptocurrency, and we know something about it but not enough, and we need to learn about it. Or we have seen all this artwork go up on sale, these NFTs, and we are still trying to wrap our heads around so what does this exactly mean. So we are constantly learning as adults, and it's no different for me. I'm also constantly learning on all these things.

Prasad Ram: [00:30:57] But the key is that what instigates our learning is the moments that surround us. Now, when you're doing "formal education" or "continuing education," you're a little more constrained. You're learning without the support of the environment around you, and this is where I feel like the affordances that we have with the technology and so forth will give us the opportunity to learn about anything we want. If you're on the Golden Gate Bridge, it's nice to learn about a parabola at that point. If you're a student in eighth grade on the Golden Gate Bridge, it's important if somebody can point out to you about the parabola. If you're walking to school and it's foggy today, it's interesting to learn about what causes fog at that point in time. If you are at a cafeteria in the school or in your office and you see that there are 140 calories in a pack of fries, then I'm curious to know how do you calculate calories in a pack of fries. And that's how I envision this whole thing being. We are constantly in lifelong learning. It's not about just professional learning. It's not just about career advancement. It's also about career advancement, but it's continuously learning. You're always learning, and that's what I believe distinguishes humans from every other animal species. We are endowed with a big enough brain that continuously seeks to learn, and we can support that.

Jeff Cobb: [00:32:52] I love that idea of, really, it seems like a combination of context and curiosity that are really the catalyst for learning that's so powerful, and for all of us to be more conscious of that. It was interesting that you mentioned the situation in the United Kingdom because my son asked me just the other day, how is it that a prime minister can be out so fast? And how do they how do they elect their leaders? And I realized I wasn't quite on top of the answer to the extent that I wanted to be. So it's actually on my list to go bone up on the parliamentary system. So thanks for reminding me of that.

Celisa Steele: [00:33:30] Prasad Ram is founder and CEO of Gooru, spelled G-O-O-R-U. You can contact him directly at pram@gooru.org, and you can find links to the Gooru site and Pram's personal site in the show notes for this episode at leadinglearning.com/episode 333.

Jeff Cobb: [00:33:51] At leadinglearning.com/episode 333, you'll also see options for subscribing to the podcast, and we'd be grateful if you would subscribe if you haven't yet. Subscriptions give us some data on the role the podcast is playing in our listeners' learning journey.

Celisa Steele: [00:34:06] We'd also be grateful if you would rate us on Apple Podcasts or wherever you listen, especially if you find the Leading Learning Podcast valuable. Jeff and I personally would appreciate it, and those ratings and reviews help us show up when people

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Jeff Cobb: [00:34:25] Lastly, please help us grow the leading learning community. At leadinglearning.com/episode333, there are links to find us on Twitter, LinkedIn, and Facebook.

Celisa Steele: [00:34:35] Thanks again, and see you next time on the Leading Learning Podcast.

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