

## [Transcript] FYI - For Your Innovation / How Artificial Intelligence is Powering Education with Dr. Ann Marie Sastry

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Hello, I'm very excited to be on the Arc FYI podcast with Kathy Wood and Dr. Ann Marie Sastry. Dr. Sastry came on the Bits of Signum podcast and I thought the conversation was so important that Kathy should host this discussion. Also, Kathy has known Dr. Sastry for many years as she has joined our brainstorm. But I'll just give a couple of points here that really impressed me and I think anyone who listened to our podcast, which is that Dr. Sastry has founded two companies. The first was called Sakti 3. It was acquired in 2015 by Dyson. It was recognized as one of MIT's 50 smartest companies in 2015. She then went on to found Amasite, where she's the CEO. It is an artificial intelligence software company that provides turnkey learning platforms to universities, businesses, governments as well.

This all came after 17 years as a professor at University of Michigan, where she received many honors and too many to list here. But when I was talking to Ann Marie, I was pretty excited to think about her as a professor back then prior to founding two companies and the idea that she was implementing some really interesting and innovative forms of education even back then. So, Ann Marie, can we turn it over to you to just give a few words of introduction?

And Kathy, please chime in as well.

Absolutely. Thank you very much for the kind introduction. It's wonderful to be here with you both. It's been a long fun journey. I guess I said [.edu.gov.com.org](mailto:.edu.gov.com.org) email addresses. And now to be able to try to tackle some of the biggest challenges in education from the private sector is not only exhilarating, it's a great honor to sort of get some of these ideas and thinking about where education should be into practice by working with educational organizations and delivering them solutions so that they can execute on what we think is a great mindset for education. Well, and yes, I'll chime in here. And thank you, Angie, for this idea.

Ann Marie, I met actually through a banker who said, wait a minute, there is a company, an investment company out there you need to meet because you are focused on the convergence between

education and artificial intelligence. And of course, that caught my attention.

And so we had a call and I said, oh, Ann Marie, you need to start joining our brainstorm sessions on Fridays because, you know, given your background as a professor, and if I'm not mistaken, it was a professor of, was it an automotive engineering? You sure know a lot about autos.

Mechanical, mechanical engineering. Mechanical engineering. And, you know, she's just add so much to our brainstorm. But here, you know, your two companies, startups, and successful. So I thought, yeah, we have to do this. In fact, we've been asked by a number of people to do a white paper on how education is going to evolve over the next five to 10 years. And

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that is on our roadmap. And Ann Marie certainly will be very much involved in it as we get to that. But during our brainstorm, Ann Marie's brilliance shows through. She's able to she's able to tackle most topics because think about it, auto or I guess you were in the auto industry as a mechanical engineer as well, if I'm not mistaken as well, or at least educating students to do that. And then you get out, become a business leader, and really now focused on AI. And what I found so interesting is when we were talking about autonomous vehicles, or when we are talking about it, you're right in there because you've got the auto experience, you've got the AI experience, and you're running circles around others who are still trying to understand what this is. So I thought I'd set you up that way. And I think it'd be wonderful now to turn towards education. And I think, Angie, you wanted to frame it in a particular way based on what happened during your podcast with Ann Marie. The first thing that really struck me was your description of education and its ability to cultivate every individual person and to bring out each individual's superpowers. And the fact is that's just not economic to have a one-to-one system in education because this is all publicly funded. There's private education as well. But generally speaking, even on the private level, there's not really an appetite for that one-to-one model. But what we have now is this system of sorting. And that really struck me. Can you just talk about generally the big picture concept here? Absolutely. And I want to return some of the many nice compliments that you've paid. I mean, there's no better person to talk with this about than the two of you. Kathy's commitment to new technology and innovation and making sure that not only she is doing this in her commercial life and her private life, but also in her philanthropic life with the Innovation Foundation is just spectacular. And so really walking the talk every single day. And it's always an honor to engage with you, Kathy. And then Angie, to be as expert as you are in gaming and many, many things about cryptocurrency really driven toward empowering people to make choices and be entertained in the ways that they want to be entertained, execute finance in the way that they want to execute their personal finances, I think, is really thematically similar to what we're talking about today, which is how do you meet people where they are? And how do you do that in a way that you can scale it? And to the point about sorting functions and that education is different and distinct to other kinds of processes of societal processes that we run. Education certainly has heavy doses of both public and private financing, for sure, from K through grad, as people like to say now. The reality is that education and self-formal education and even a great deal of professional education has been thought of as a sieve, as a sorting function. You pay your dollar, you don't necessarily get your hot dog. You pay for an experience or the public pays for an experience for you, all of which has tremendous ROI. You come in and the product is a rating, an A, B, C, D, E, F, or some kind of a credential. The reality is that talent is not found, talent is cultivated, and education in its best imagination and implementation is a process of cultivation. The reality is that on multiple dimensions, people engaged in an educational experience may excel at wildly different things. And so the ideal process is one that can cultivate that person's skills, gifts, and talents to the point where they can use those economically to become economically viable and to be productive members of society. And when you think about how to scale that, certainly one-to-one or one-to-ten or one-to-thirty doesn't work for someone's entire life.

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In this age of amazing innovation that I think we're all fortunate to be alive to see, the reality is that we will all need to be lifelong learners. And so delivering education and training in a way that scales, but yet is mass customized, is vital. And when you think about the choices that people have, and of course obviously a great deal of it needs to be online, it needs to be supported by online platforms even if it's on ground. So what are we competing with in education? We've been thinking that education is something you take your cod liver oil, you take your vitamins, that's what you do, you muster through an experience because it's good for you. The reality is people have choices with what to do with their time, including students. And we saw during COVID that they often elected not to pay close attention to educational pursuits, but instead elected social media or streaming video or gaming experiences, all of which can be very salutary. But what that means is that education has to compete for people's attention.

It has to compete. It has to be a competitive experience. And many, if not all of those other experience utilize AI to serve things that are just in time relevant to the user. And that is what we believe education has to evolve to become. What you're describing sounds a lot like the media model and the gaming model and the idea that engagement is what matters.

Absolutely. Engagement is the more game.

Yeah, I think as I'm listening to you, not just compete, I think, but inspire. And that is why I did start the IF, which is the Innovation Foundation, because, and we started in the middle school, so sixth grade, because that's where these schools are losing a lot of these students. They're not inspired. There is a lot of competition out there, but they're not inspired. But if you can actually start at Toddler, I would say, we were handed here in Pinellas County, Florida, sixth grade. But if you can get them excited about an opportunity that is going to be life changing, and especially in socioeconomically disadvantaged areas, where you can say to these young people, hey, innovation, this is, we teach education through the lens of innovation.

This is the great leveler. This is going to give you an opportunity to get out of your circumstances right now, or your family circumstances. And you have the potential to rise to the top of your field, because everyone is on the same plane when it comes to innovation. So this idea of inspiring them, inspiring them, and getting them focused on their future, and getting them excited and almost addicted to whatever does inspire them.

I think you're talking about twin sides of the same coin. The point being that you're trying to achieve this engagement that's productive. And the reality is that software companies and others involved in education have to work at that. That it's not enough to say, I'm going to rate you or even certify you. That we have to be thinking about how to serve up experiences that that last mile is actually great. And then in terms of inspiration, when we think about our own lives, I think we can probably agree, I would love to hear your experiences, Kathy and Angie. But speaking for myself, I can say inspiration came from unlikely sources. And it wasn't always a product of a certain part of an educational program or even a teacher at all. So being able to serve experiences and access online breaks down these barriers and allows children and adults to access people who can inspire them. And that's another great, great leveler of online in general, that you're not in your silo, that online gives you access, that you can't keep people away who want to become successful and want to be part of something that's going to be impactful. You know, we, during COVID, and I know you started Amasite during COVID, we were inspired, actually, by the impact that our own research made age-appropriate

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had on children. We were challenged by Jericho Partnership up in Danbury, Connecticut. We were challenged by the then president of the organization. She was saying, my kids have nothing. I mean, this is a lost year for them, or two years. I need to inspire them. I need to hook them onto something. And so we did have Sam the Drone Man. So Sam Chorus, who's our analyst on drones,

helped us put together a six-part seminar on drones. He and Tasha Keaney as partners. And we also did another one for 3D printing. The first one was for high school. The second one was fourth and fifth grade. And by the end of the course in the beginning, I think they didn't know why we were even doing this. And it didn't seem very interesting to them. But when we started talking about something like drones and telling them, at the end of this, we're going to give you all drones. But we want you to learn about them first. We had an amazing result, number one. And now a few of those young people, students, are still following Sam the Drone Man on Twitter and following who he is following in the drone space. So this idea of becoming passionate about something and following someone whom you admire and then going for it, we saw put into action because of COVID. I don't think we would have been thinking in this way, or we wouldn't have thought about this at all if COVID had not happened. It's really exciting this is happening in Pinellas County. I would love for you, Kathy, just to give a little perspective on that for listeners. Yes, you know, we arrived. We moved ARX headquarters. We're a hybrid organization, but we moved ARX headquarters to St. Petersburg in Pinellas County, so across the bridge from Tampa.

And we've been here a little more than 18 months. And I'm as shocked as everyone or anyone to be able to tell you that this fall ARX research made age appropriate is the science curriculum for sixth grade throughout Pinellas County. And we're doing a pilot in seventh. And if all goes well, we'll be through the middle school in a year or two. And the two educators I selected, I knew very well because they had educated my children. They were heads of Montessori schools. So Romani Daluis, the Metropolitan Montessori School in New York City, and Mary Zeman, the Grumman Hill Montessori School in Wilton, Connecticut. And I just knew that they would be able to deliver a curriculum using ARX research, again, making it age appropriate, that in their minds they call it a mindset change. And this is what we're talking about here. And really treating students as individuals and helping them learn from their starting points, their strengths and their weaknesses, understanding them. And Romani just delivered the sixth and seventh grade curriculum to me. And there's nothing like this out there. So we're pretty excited about it. And we would love the opportunity at some point to scale it, to scale it throughout Florida, throughout the country, throughout the world. I mean, you kind of think big when you think about disruptive innovation. And so we have been experimenting with online, including Amasite. And it's been an interesting experience. And I'll go into it a little bit, but maybe we should have Amarie talk about how she's experienced the go to market and we'll go from there. Absolutely. And the Pinellas curriculum, the IF curriculum, is doing what everybody ought to do, which is contextualize learning around what people need. The average sixth grader will have a job someday that doesn't exist yet. That's really important context. So the reality is putting education and training opportunities out there, whether they're middle school kids, high school kids, grade school kids, or what we do mostly, which is professional learning, including teacher learning and executive

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learning, is vital. Because people are working in a world that's using tech every day that they had no formal education in. None. The vast majority of people, the tiny minority of people who had any education in the five technology areas that IF is identified as transformative and disruptive. So when we go to market, there are incumbents in the area that use technology that is quite mature and was built in all fairness to do a different thing. It was built to store content, content management systems in the main. And there have been additions over time to allow launching of different kinds of widgets, if you like. But the reality is the intentionality wasn't really focused on engaging the user, which in our worldview is the key thing that has to happen. Work in hand in hand with organizations who are conceptualizing and executing on important curricula and make sure that that last mile of delivery actually delivers engagement at the same level of quality that other online experiences do. And also enables learners to access not only just in time information, but one another. Study after study after study. The behavioral sciences is very clear on this. Peer to peer learning is essential from kindergartners to senior executives. It's how most of us learn. So the notion of a lonely figure at a podium talking at a group of 30 to 300 people being effective is completely wrong. Anything that enhances engagement is going to create more inspiration, as Kathy points out, create more engagement and create more successful outcomes. And those outcomes will be on many axes. They won't just be on a grade or on a certification, but they'll also be on what we call social-emotional learning or formally called soft skills, which most people now call durable skills because they're durable. Communication, teamwork, managing conflict. These things are really learned experientially through peer interaction. Additionally, laboratories and experiences can now be delivered online. And I would invite Angie to comment on the amazing things happening in gaming now. We're building games for our customers, of course, because they create a sense of community. They create a sense of competition, healthy competition, and they create unprecedented engagement. And these two things are merging. And our belief is that this is going, education five years from now will look entirely different than it looks now. In terms of our go-to-market, which is what you asked about, Kathy, we started the company just before COVID, as you pointed out. So we started in 2018, and we were kind of alone, tinfoil hat crowd as I was in the batteries of my last company saying, AI and education are really important. And I don't think we're doing this right, guys. I think we actually need to focus on cultivation and engagement rather than merely store content, that it's not a completely practical exercise. And it certainly isn't just a ratification exercise. We need to think differently. COVID, just explain that to the whole world in two years flat, because everybody had to go online and recognized that using the current tools, it was often a very lonely and very ineffective process. It was cataclysmic for teachers who had to all of a sudden figure out how to utilize tech that had been really a failsafe, really almost a backup system, a place for storing content, but really not a platform for engagement. So a few years into building this company, our approach has changed dramatically because the world changed and circumstances explained this to people. So we're in business, we do enterprise training employees, we have customers who train all over the world, and universities who are really more focusing on professional education now, because they understand that as a public good, their alumni who typically outnumber



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their matriculated students by 20 or 10 to 20 to one, except for young universities, there aren't too many of those. So the alumni are really increasingly the focus in order for universities to meet their missions as public good. And the professional learners can really only be accessed online, because people will not put their lives on hold, they cannot put their lives on hold, it reaches more people, it can be made very accessible. Another important market for us is government. We're increasingly focused on getting government support for programs that can be delivered to multiple universities and have executed some strategic partnerships there. And then finally, in other nonprofits, like museums, for example, or institutional cultural organizations that deliver learning as part of their mission. So when you think about a big museum like Connor Prairie in Indiana, that every kid in Indiana goes to Connor Prairie, it's a very important experience. Now they're getting modules, webinars, learning experiences that are building Connor Prairie's impact in K-12 and even in adult learners. So for us, the go to market changed dramatically after COVID, because we were trying to tell people, hey, this needs to be more interesting, this needs to not be terrible. And we're like, yeah, yeah, yeah, that's fine. It's like, yep. So it's a little bit easier to have the first couple conversations, I would say. And before we go to gaming, Angie, and I'd love to love to hear you on gaming, what this this idea of peer to peer, this is very Montessori. I didn't know anything about it before, before I put my children into Montessori, and I saw the power of it. And so I think you're absolutely right there. And I have to give credit, which I did not do before, to the former superintendent of education, Mike Grego, who is now advising if for really spearheading the charge into the Pinella School. Of course, he had to get the agreement of many stakeholders, but he felt it important enough. And it was so interesting to watch his reaction when I first explained what we were trying to do. He, I could tell, was just so inspired. He had been himself, I keep using that word. He had been waiting for something, and this kind of hit the mark. So just want to make sure to give him credit for that. So, Angie, peer to peer, gaming, everything that Emery is focused on is in your sweet spot. Yeah, I was actually just going to say before that the funny thing is, is each of you independently have talked to me about Montessori education, and this idea of the individual and focusing on, you know, finding greatness in individuals versus teaching to the crowd, more or less. And I would say in gaming, we're seeing the same thing. We're seeing a move toward creator platforms. This was kicked off, you know, 10 or 15 years ago by Minecraft, and has been, has accelerated with Roblox and now FXUEFN. And the idea is that players, one, they don't call themselves gamers anymore. My daughter, who's 11, has a dress store in Roblox, and she would never describe herself as a gamer, even though she spends a lot of her time, her entertainment time, in Roblox with her friends hanging out at her dress store, creating and coding, actually. So it really does lean into kind of a creativity and collaboration type of engagement. And so that's why I was also really excited to hear Emery about, you know, all of these big ideas that you're thinking about, because, you know, it might be good for you to just explain how does this work in practice? I mean, we all would agree that one to one, especially, you know, like, if you have kids like we do, the idea that a teacher is teaching specifically to my child, based on my child's superpowers, that sounds amazing. But how does that actually work in practice? And what role does AI play? It's a great question. And to your point about Montessori, my kids did Montessori too. And it was amazing. And it changed my thinking

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about how education should work, even though I grew up in universities and my dad was a professor, my mom was an educator, first grade teacher. But having my children in Montessori school like Kathy, opened my eyes to thinking about the individual and cultivation. It influences our platform. So as does as do social media, as does streaming video. First off, everything has to be easy to use. Cognitively, if you are in an online experience, the quality of experiences that one can choose from among is so high now, that little biffs, extra hoops, friction, heaven forbid, death by PowerPoint for a few months to learn how to use it won't work. So, you know, I think that coming to this with low to zero ego is very important. Coming to this with the idea, you know, just because what's on the other side is really great, that's not enough reason for someone to swim through molasses to get to that experience. You have to be very humble. Think about how to make it easy. Think about how to reduce that friction. Our platform is structured a lot more like social media than it is a so-called LMS, a learning management system. There's a storage on the left side when you open up. And of course, it works mobile. It works on a tablet. It works laptop. It's responsive. But there's a place where you store information where the user, the learner, can go select. And most of our customers choose to let them consume material out of sequence. Smart thing to do if you can do it. I mean, if it's not, you know, if you don't have to build on it, a learner can go consume a laboratory online, consume a slide presentation, consume a video, consume an engagement, watch a live stream, participate with peers, do a whiteboarding session. On the other side of the platform is a feed. And if you think about the publisher model and the good parts and the bad parts of the publisher model, the bad parts being things like \$400 textbooks and 8 to 12 year old material, the good part being distribution channel and ability to engage people who are practitioners and subject matter experts into producing content. And so we looked at the publisher model and said, wait a second, what's the upside of social media? Well, you get something that's just in time interesting to you and it is mass customized. What is the downside? Obviously, rabbit holes, harassment, bullying, the kinds of mental health effects that we've seen from social media have actually been profound for children who grew up with social media. And Angie and I have talked about this, particularly for girls. So our execution was about working with publishers to make sure that we took proper license to corpuses of information that were relevant to what was being taught on the platform, always branded to our customer, our platform is always branded to the customer, and then making sure that we could search those and use bots to do that. So we would serve up information alongside of canonical required material that's relevant and contextualizes it. And so when electric vehicle engineering is taught on our platform, you not only get canonical material about what is an electric machine, how are show me a battery spider chart and what the performance looks like, you also get here's a news announcement about the new Gigafactory. Here's a news announcement about the head to head between Cybertruck and the Lightning. You get information that contextualizes and the purpose there is to treat learners as if they are intelligent agents. So they're consuming information that's relevant to what's happening in the world and relevant to their futures. Additionally, we like widgets as much as everybody

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else. We built our platform to accept them. That's different. Our thinking on this was different. So rather than think about how, you know, think about this like a sort of traditional pre AI software company would think about it, which is let's get let's drive a lot of users and then trap them in our ecosystem and make it super sticky. So they they learn how to use this and they don't want to learn anything else. Our thinking was different. Build an infrastructure that enables integration of thousands of APIs so that as innovations occur inevitably, again, low ego, ingest them, grab the API, make sure our customers are able to use whatever widgets, whatever software, whatever single sign-ons are required in order to make it smooth for the enterprise and smooth for the user. And to do that, we obviously use a cloud infrastructure. We elected to be a Microsoft partner, which has been great for us. And we're able to use code as infrastructure now to ingest and integrate APIs that our customers and partners want to make available to their to their learners and users, if that makes sense. You know, I'd love to ask a question about that just based on our experience here in Pinellas County. It seems that during COVID, another company, I don't know if it dominates the market, but Canvas, I guess, was the go-to for a lot of schools, at least here. And when you have an administration and teachers who are used to doing something in one way, however dated it is, but it got the job done in a way, it's very difficult to pull them off or to transition them. When you say APIs, do you mean that there's something you could do with an existing system like Canvas or am I misinterpreting that? No, that's true. We think that the experience needs to be refactored. Certainly, we can integrate with codes like Canvas, Blackboard, D2L, Moodle, et cetera. If it's this light integration like opening an iframe and see their platform or they see ours, that's fine. We like, though, to make sure that the innovative techniques that actually work and engage people, we integrate. So we think we were the first EdTech company to announce GPT integration. GPT-3, we announced our Valentine on February 14th this year, and then we quickly followed with GPT-4 for the simple reason that we wanted our customers, our partners, and we wanted our learners to be able to utilize that technology safely and to good end. And so obviously, we turned the dials down on creativity. We don't want the AIs hallucinating for our users. We're running a free course on it now on the platform, actually, just very introductory for people who haven't really seen the technology and want to try it out. But the key idea being keep your eye on the ball. The reality is AI is going to take many forms, and it is going to supplant, it is going to eat software that doesn't integrate it. And we believe that in order to be successful for our users, for our customers, we have to be able to innovate and ingest the latest innovations. And so building in a way that we can take in those witches, to your point about the incumbents, the K-12 space is actually incredibly chaotic, incredibly chaotic. And to your point, Kathy, about people who are underprivileged, people who are experiencing poverty, may even be experiencing homelessness. When you think about people who are working really, really hard to get into the middle class and districts that may be under-resourced, the reality is free solutions are very appealing. Of course, the business model is if you're not the customer, if you're not the customer, you're the product. So they ingest data, sell the data. Amasite decided at the beginning that we would not monetize data. We would not monetize user data. We don't think you should have to trade



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your data for an education. So we don't do that. We don't even share data with third parties. Our business offering is different, but yet it's logical about how that business model would have entered education, just like it did social media. When you look at the K-12 space again, so that sort of hopefully makes sense about why there are all these different solutions, from very expensive solutions to free solutions. And teachers in general, in our experience, are incredibly frustrated, incredibly frustrated with a plethora of solutions. And sometimes the training that is thrust upon them, remember, teachers didn't go into education so they can be expert users on some platform. They went into education because they wanted to help kids. And that's the reality. And to people who may be cynical about that out there, I disagree with you. I think most people become teachers because they want to help learners, not fool with software. So when we look at the future, it's about ease of adoption and ease of use and ease of integration. We think that innovators coming in with new educational programs are going to be our best bet. We find that we end up working with educational organization, higher ed, K-12, businesses, government that have sort of seen the future and said, we want to work with Amasight because our vision is aligned. So for example, in workforce development, there are parts of government that understand AI is going to take over everything, and parts that don't. We work with the parts that do right now. And we believe we can scale that because the availability of public facing generative AI, chat GPT, and of course chat GPT Power and Bing and now Bard and AWS will roll out solutions as we've talked about, that is changing the zeitgeist. Instead of this being the domain of a few pointy heads like me, everybody can see the power of AI now. And that is changing minds about what most people believe the future will be. Certainly, ARC has been at the forefront and frequently been alone, but yet committed of talking about how the five platforms are going to change the future and has enjoyed a huge, huge tidal wave of support in terms of people voting with their feet. That should tell you something. The average person on the street knows that technology is going to be key. And so all of us, in my view, should be planting our flag in the high ground and developing solutions for that future state. So we don't worry too much about the stasis of the incumbency because all of our surroundings are teaching us right now. All of our surroundings are teaching the public that AI is going to be important and that these experiences can be better. So the lift that we would have had in 2018-2019 when we were rolling out first products and with really, really adventuresome customers is not the lift we have anymore because the average person understands this and it's great. You know, it is interesting that you say it that way because I think in our industry, many people are shocked that we did not lose much in the way of assets through the last two years. And as you say, it is because enough people out there understand that the ground is shifting underneath us. And many of these investors also know that they're not exposed to where the world is going as much as they are exposed to where the world has been. So I think, I do agree, I think that the ground is shifting here and I do believe that ChatGPT has captured the imagination of consumers and businesses and I believe it also will capture the imagination of educators. I will say it's been interesting to be in meetings where there are attorneys and the attorneys are pointing out all the things that are wrong. They talk about hallucinations and how ChatGPT just lies and so forth and really don't understand that we do have to

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become prompt engineers. We have to learn how to use the technology. And I think there might be some resistance initially in education but I think the world around us is moving so quickly into AI that there will be no choice but to follow.

I totally agree. And what you said about attorneys and regulation and risk management, really that whole big bucket of risk management, I'm sure, I think we've all lived through eras of cheap calculators, Lotus one, two, three, right? Salesforce, technology is coming along that reconfigured school and work and you can defend against change. You will wind up on the wrong side of history or you can lead and really research, enunciate and vote for smart implementations that benefit society. And I think that's the best place. Ideally, we all wind up in that place, certainly ARCAS and certainly Innovation Foundation has, placing bets on organizations that have a salutary effect using technology. I think Angie's comment about the way her daughter uses technology

and is now a coder is informative here. And it's lived experience for all of us that you can be pointlessly defensive of technology and you can get crushed by a wave or you can surf it and carve out a path that's beneficent. And I think, Angie, your own experience, maybe you were going to launch with this, but you have children two, 21 and 22, and then an 11 year old. And so, I think you're already starting to see changes. We'd love to hear about that.

Sure. My 22 year old son did not go to college and he has been a coder since he was about 15, working professionally since then and then has been a full-time software developer since he graduated from my school. But he really faced a lot of challenges when he was in the lower school and is a pretty reserved, respectful kid and he would challenge the teachers about using, why are we using scratch? It's for young kids. This is the only thing we get here to learn about technology or to use technology. And then, fast forward 10 years later, my daughter in the same school happened to be with the next generation of teachers who were in their late 20s and technology

was kind of integrated into everything and into all the subject matters. So, one thing you said, Emery, that really struck me was social media. The fact that you're integrating social media is super interesting because that is a natural highway of engagement, as we all know. And I've been thinking about this idea of school-friendly versions of AI because my older daughter is at Bard College in Berlin and one of her professors came out with a statement when Chad GBT came out

and said, everyone's going to be using this. You can use it just so you know, the bar's a lot higher because we're going to know now everything that's already out there is a given and so we need to see more creativity, more ingenuity in what you write. And so I started thinking about this idea that there will be pressure from parents in the education world to have kind of school-friendly or child-friendly AI models. And if those could also be social media platforms, wow, that could really bring some big mind share with the next generation. Absolutely. And it has to be level-appropriate. Sorry, Kathy. No, I was just going to say, I don't know if you know this, Angie, but Roblox, the CEO of Roblox, is passionate about education. So we're going to see a lot from, you know, this creator autonomy in education. I'm sure Emery, you would agree. The Minecraft was viewed as just another video game until people realized it was so educational. And we've seen kids grow up on Minecraft, grow up on Roblox, and they want more and more of the same.

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They want engagement. They want Club Penguin, Minecraft, and Roblox before they want a set of boring flashcards, right? And the reality is, when you deliver engagement, the magic happens. It's not actually magic, it's behavioral science, and we've seen this over and over again. The reality is that increasingly, education is going to change because the people going into teaching to Angie's point have changed. That this is a generation in teaching now that has experienced social media, has experienced streaming video, has experienced gaming, has experienced social, and it has profoundly affected their lives. When smartphones first became important, I was a professor, and many of my colleagues were resistant to the kids bringing smartphones into college class, like, oh, what if they find something that turns out to be irrelevant? My attitude was good. Let's have a discussion, okay? They don't need me to read out loud from page 68. I would like them to do that before they come to class. The flipped classroom, so-called model, has become popular. But really, it's a change in thinking. Let's use the time together, whether it's on-ground or online, to actually explore the discipline, to actually maybe even produce something during an engagement. That turned out to be far more valuable. Even if you bring in information, it turns out to be wrong. Great. Let's learn about how to vet information. Let's learn about how to find and read and analyze a peer-reviewed paper. Generative AI is a tool. It's just a tool trained on all of us. It's next level, obviously. It's decades ahead on the log plot versus a calculator, so I wouldn't mean to demean the amazing technical achievements in terms of cloud computing, in terms of algorithm development, in terms of assembly, the business acumen required to assemble these large databases of human behaviors on the internet that form the corpus that feed these large language models. All of these have been amazing technical achievements. It is a tool. Just as people were reflexively against calculators, were reflexively against spreadsheets, you'll see people reflexively against using the tool, but integrating these tools safely and beneficently is extremely important. Extremely important because the reality is people are going to use these tools, whether or not they are integrated into educational platforms. I believe that my best use and the best use of our company is to make sure they are integrated intelligently to the good. The model that we've chosen is not to try to blow up schools, but to try to help them achieve this, try to help them have them be next level, help them be better, not to compete them off of each other. I mean, we love aggregator platforms. They're great. They do a lot of good, Coursera, edX, Udacity, the like. We think that's great. It's not us. We think individual institutions need to have a brand identity and be able to leverage this technology so they can serve their users and learners. That's our role we believe to play. Will you be able to ignore this? No, absolutely not. You cannot ignore this because it would be to the detriment of every learner. I actually believe that not using AI thoughtfully in education and training is actually malpractice because every single person experiencing education, training, learning is going to need to leverage this technology to Kathy's earlier point to be economically relevant. It is a great disservice not to use these tools during the process in whatever way makes sense. I'll come back to inspire because they're going to enable us to inspire in so many more ways, I think. Angie, any concluding thoughts here? Honestly, I thought that we were going to conclude and I was going to say Dr. Sastry, give us some final words and you just encapsulated it all to the point that Kathy ended with inspire. I don't think you can have anything more than that. I think inspiration

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is the final word. We don't really, and I think about your son, Angie, I think about kids who have prodigious capabilities that are not measured well in school, certainly not cultivated. If you can imagine an educational environment where any learner could play a game, could engage with teachers who might be remote to the district where they are, to be able to consume social and emotional learning, durable skills alongside regular curricula at will, to be served up content generation assistance that helps them overcome dyslexia, helps them overcome other neurologically atypical conditions. I never like to say abnormal and I don't like to say disability. There's just a wide spectrum of human beings. I like to use the word atypical and to help create an environment where people can exploit their strengths. That is something that online enables beautifully and with an AI assist to be able to use that corpus, this huge corpus of human behaviors and be able to direct it to help people and in a customized way leverage their strengths. I can't think of anything else I'd rather be doing with my life right now. So great to hear. Amen. Thank you so much, Ann Marie, for coming on to ARC FYI. Thank you so much, Angie. Thank you so much, Kathy, for all the good work you're doing. And thank you, Kathy, for giving us insight into Pinellas County and what you are doing with ARC IF. It's exciting. And Angie, thank you for inspiring this podcast. ARC believes that the information presented is accurate and was obtained from sources that ARC believes to be reliable. However, ARC does not guarantee the accuracy or completeness of any information and such information may be subject to change without notice from ARC. Historical results are not indications of future results. Certain of the statements contained in this podcast may be statements of future expectations and other forward-looking statements that are based on ARC's current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance, or events that differ materially from those expressed or implied in such statements.