Ramona Schindelheim, WorkingNation editor-in-chief:

You are listening to Work in Progress. I'm Ramona Schindelheim, Editor-in-Chief of WorkingNation. Work in Progress explores the rapidly changing workplace through conversations with innovators, educators and decision makers, people with solutions to today's workforce challenges.

It seems hardly a day goes by without the topic of artificial intelligence being raised, whether it's simply questions or out now warnings about how AI will change work, life and learning as we now know it. Joining me on today's podcast to discuss some of the implications for educators, students and workers is Alex Kotran, co-founder and CEO of the nonprofit, The AI Education Project. Alex, welcome to Work in Progress.

Alex Kotran, The AI Education Project Co-founder and CEO:

Thanks for having me.

Ramona Schindelheim, WorkingNation editor-in-chief:

Let's just jump right in. While artificial intelligence, and maybe more precisely ChatGPT is the word of 2023, you've been talking about it for a number of years now. So tell me a little bit about what made you decide to do The AI Education Project. What made you start looking at it?

Alex Kotran, The AI Education Project Co-founder and CEO:

Yes. I had a bit of a meandering pathway to the world of AI and education. So I started my career in politics. So I graduated from Ohio State. I worked on the Obama reelect. I knew I didn't want to run for office, but I loved the retail politics of working on a campaign. So I went to DC after the campaign as many folks do, and I was hustling to find a political appointment. I ended up getting an appointment to HHS. And so at HHS I was doing community and state level outreach for the Affordable Care Act, for Medicare, for Ebola. And that actually I would say grounded a lot of the work that aiEDU does, which is very focused on the grassroots and actually going to places where we know AI conferences haven't traditionally taken place. So I started that work early on in my career.

After the administration was coming to a close, I was trying to figure out what to do next. And I had a really good mentor in my life who was just like, "Alex, this AI thing." He called it big data, he meant AI. "This AI thing is a big deal. I don't know anything about it, but I think you should just follow that. Just try to learn more. I think it's the future." And this is like a lobbyist who worked with a bunch of tech clients.

So I ended up doing that. I went and got a job at an AI company called Opower. So they were a clean tech, basically using machine learning and behavioral science to nudge people to reduce energy usage. And from there I was on this sort of path. I was learning more and more about AI at work, but also just on the side just reading books and watching YouTube videos and lectures. And I was growing more and more convinced that this was different from other futurist hypey technologies. There is actually substance to this.

And the more I read, the more I sort of developed that belief. I ended up volunteering for a nonprofit that had just spun out of the Harvard Kennedy School of Government called The Future Society. And I was helping them organize something called the Global Governance of AI Roundtable, and it was at the World Government Summit in Dubai. And so all the who's who of AI ethicists were there. And it just so happened that I'm telling you... the story is getting somewhere, I promise. One of the funders for this nonprofit was part of this summit and he saw the work that I was doing just on the side pro bono and basically approached me afterward and was like, "Alex, I want to hire you. I want you to work for my company and I want you to help me build a corporate social responsibility arm."

And so what his company did is it was basically it was called H5 and H5 was a pioneer in the use of AI and legal services and litigation. And the CEO was basically watching as AI was slowly creeping into the legal system and yet judges had no idea what AI was, how it works, how it comes to the recommendations that it's providing them with really critical decisions like setting bail and sentencing hearings. So he hired me to basically build a training program. His name was Nicolas Economou. And Nicolas hired me to build a training program for judges and we partnered with Stanford and NYU, and the National Judicial College, and we trained hundreds of judges and lawyers.

And then this fateful evening, I was on the phone with my mom. My parents are both educators. My mom has taught in Title I schools her whole career in Akron Public Schools. She was a math teacher. Now she's a principal. And I was telling her about one of the events that we had done, I think it was an NYU training. And she commented, she remarked really offhand. I was like, "You should come to Akron and do a training for my kids. I feel like they should be learning about artificial intelligence."

I'd been attending all of these seminars and conferences. And the idea that high school students weren't part of this conversation was kind of surprising because when you hear Silicon Valley and you hear the foremost technologists talk about artificial intelligence, they are speaking with a certainty as if it is a foregone conclusion that this is going to displace tens of millions of people within the next decade. Sure thing. We can bet on that, the idea that high school students aren't part of that discussion when the jobs that are going to disappear are jobs that they're potentially considering as their career pathway.

And so there seemed to be some really obvious knowledge that could be imparted on the high school students my mom taught. And so thus AIDEU really began as a investigation into is Akron Public Schools the exception of the rule when it comes to student learning opportunities about artificial intelligence? And the more we just talked to any teacher or principal that would take a meeting with us, and we've talked to thousands over the last couple of years. And out of 14,000 school districts in the US we could only find about less than 12 that had some kind of an AI program. That was the beginning of it all.

Ramona Schindelheim, WorkingNation editor-in-chief:

AI is with us. It's been with us for a while. People need to know about it. If they want a good career, because there are careers there. So what are you doing at the project to really empower students to be able to use this to their advantage and create a good career?

Alex Kotran, The AI Education Project Co-founder and CEO:

We have to move past this question of should we allow students to use ChatGPT? Because industry and business has already decided that this is not a question of should, it's a question of how. Full stop. They have internal management consulting teams at many of the biggest companies trying to figure out how quickly can we deploy language models across every corner of our business to act out more productivity they see it as a competitive advantage or competitive risk because the future of work isn't pausing to consider whether ChatGPT is legitimate for somebody to use, schools are going to have to get there.

It is hard though because it really does upend a lot of the bedrock of the way that we assess intelligence. Language has been a heuristic or a proxy for whether or not someone is adept enough or capable or smart for basically the history of civilization. And so the fact that now we have to now reevaluate all of these places where we've relied upon writing as a signal for whether or not someone is worth our time or consideration, it's going to really upend more than just schools. And I think teachers just happen to be the first group to really have to face this head on and deal with it.

Ramona Schindelheim, WorkingNation editor-in-chief:

We talk about teachers. Say somebody's been there 20 years, 25 years, they didn't learn artificial intelligence, they did not learn this when they were in school. It is now something that is part of our lives even more so. How do you get the educators up to speed?

Alex Kotran, The AI Education Project Co-founder and CEO:

So I think educators have to be up to speed first. What does it look like for every student to use ChatGPT effectively and competently? You have to have a clear strategy to ensure safe and responsible use of the tool, and that will include things like policies at the district level and privacy considerations and safety considerations. But one of the biggest components of safe and responsible use will be having a teacher at the wheel. This is not about automating the work that teachers do. This is about giving teachers more capacity to do their best work as educators. When we think about teacher training and education, it's really almost a necessary condition for students to really be able to explore these tools. It also happens to be a great way for teachers to enhance learning, and it has profound implications for accessibility and actually enabling us to provide more supports to the students who are frankly the most marginalized. The most marginalized kids today are the ones who benefit the most by far.

Ramona Schindelheim, WorkingNation editor-in-chief:

Yes. Teachers have to learn it, teachers have to be upskilled in this as well. And so if they're not, then the kids who are coming out of school will be at a disadvantage. As you said, the best companies out there, the companies that are going to thrive are the ones who are taking advantage of this and many already have artificial intelligence, and we see it every day in our lives. How do we get kids on that path, or do you think they're just intuitively already know it because we are all kind of using all this kind of equipment and technology already?

Alex Kotran, The AI Education Project Co-founder and CEO:

I think some kids are going to be early adopters, no doubt, probably more so than teachers. If we just sort of let things play out without any interventions, yeah, kids are going to be more likely to be early adopters. But a really dangerous place to be if you're trying to rely on students opting in to this process of building competence, because some kids will. But we know that certain types of kids are going to be more likely than others to tinker and play around with the tools. And it takes some time to really learn how to use ChatGPT effectively. It's very easy to get started, but for me, it's taken six months and I am still just now really starting to understand the level of depth that you can get out of the tool if you understand how to interact with it.

So that requires facilitated learning experiences and it has to happen in the classroom. To do that equitably, it's even more important for these to be facilitated learning experiences in core subjects. This can't be a introduction to AI class that's an elective because it doesn't matter whether you're going to be a plumber or a investment banker, you're going to be using generative AI. If you're a plumber, you're going to be using it to write your contracts with customers and to draft your weekly marketing emails and to help you troubleshoot a complicated interaction with a client. So every student needs to have access.

Ramona Schindelheim, WorkingNation editor-in-chief:

We've been doing this here at WorkingNation for eight years, and my boss, our founder, Art Bilger, often has said in 20 years, a marketing department of 20 is going to be a marketing department of one. He didn't know it was going to come so soon. He's been talking about this for a long time that we see how technology is changing. So to make sure people are competitive and they're not left behind, you really

do need to make sure everybody has an equal playing field. So what is The AI Education Project then? Are you advocating for a certain set of policies? Who are you talking to? How are you trying to make this happen?

Alex Kotran, The AI Education Project Co-founder and CEO:

Our core intervention is we build really, really high quality award-winning curriculum and it's curriculum that any school in the country can use. We've focused on middle school and high school, but we have ambitions to go as soon as possible to K five. And our curriculum is designed to embed into core subjects in addition to computer science and CTE. And it's really important, getting into core subjects because that means that students don't get the chance to opt out or opt in. They're just forced to required learning. That's how you address the equity piece. The reason that's so critical is so if you think about assessments, so the real answer to assessments and cheating is the minimum bar goes up significantly because you're not writing an essay about The Scarlet Letter, you are creating a screenplay, and you're probably also creating the marketing campaign for your movie.

And you're illustrating the cover and you're actually illustrating, let's say 10 of the scenes in your screenplay. Heck, you're going to go ahead and do the casting as well. And that's feasible today in the same amount of time a class might spend on a different project with a much less interesting output. For teachers to be able to raise the bar, they have to ensure that every student has access to AI tools because you can't expect a student that doesn't have access to AI to do that level of work products. It's just like a different order of magnitude. And so in order to even solve the question of cheating and assessments, we first have to solve the equity question.

Ramona Schindelheim, WorkingNation editor-in-chief:

I agree with you. I think there's a lot of school districts out there that are in maybe a poorer neighborhood or they may not have the budget that some others do. Do you think that there should be outside of a school system, maybe some programs that could also enhance this for students who don't have that access in their own school district?

Alex Kotran, The AI Education Project Co-founder and CEO:

In general, yes. The more supports that we can have, the more opportunities for students to learn and use AI, the better. We are really focused on getting this into schools. This is as imperative, if not more imperative than broadband access. And COVID showed that we put our minds to it. We can make progress in bridging those gaps. And it's not perfect, but we're close. We don't have 20 years to get this right with AI though, we have three. That's the velocity of the technology is really where the challenge lies. It's like we actually have the right foundation. We've invested in computer science and STEM ecosystems all over the country, and we have a lot more muscle memory when it comes to funders and corporate philanthropy and everybody working together to address these challenges. But the normal pace of education is not going to keep up with the pace of adoption in the economy.

aiEDU is really focused on what is a systems change strategy look like? And the answer to that is you have to support the district leadership and the central offices and help them figure out what safe and responsible use looks like because that is a necessary condition for teachers getting access. And for teachers, you have to show them, not just tell, but show them how AI actually works, show them what hallucinations are, where AI is just making up facts that sound plausible just to sort of fill gaps in its context or knowledge. You have to show them what AI ethics really means.

When you talk about algorithmic bias, you have to go and open up Midjourney and show them what outputs when you type in a doctor, which is invariably for me, at least for older white guys. So they have to see that for themselves in order to guide students through those situations which they will encounter. And that's the thing is we cannot protect students from the weird outputs. We can do our best to reduce them, but we actually don't really fully understand how these models work. And so we will never be able to guarantee that there's not going to be some stuff that happens. And so again, but that's why you have to have the entire system working together towards this outcome.

Ramona Schindelheim, WorkingNation editor-in-chief:

I'm now thinking we're going to have to rewrite that old phrase, reading, writing, arithmetic, and AI. So it's the three Rs and AI.

Alex Kotran, The AI Education Project Co-founder and CEO:

Maybe, or maybe it's computational thinking, I think actually. Because AI is going to be supporting reading, writing and arithmetic, but it's sort of applying those skills with a computational thinking mindset. I've been nerding out about that specific thing. It's like, how do you deal with this question of, you have some CEOs of AI companies saying that software engineers are going to be one of the first careers to get replaced. And if you're a computer science teacher and you hear that, it's pretty deflating. And so I've been asked this question a lot, and the way I respond is, even though a ChatGPT is very good at writing in English or in other languages for that matter, you don't really hear anybody saying, "Well, students don't need to learn how to write anymore." And I think there is an acknowledgement that there are these metacognitive skills that will persist regardless of whether or not we're using them in our day-to-day work. And I think computational thinking is maybe that new paradigm for all the work we've invested into computer science and digital literacy.

Ramona Schindelheim, WorkingNation editor-in-chief:

If you could talk to parents, educators, students, what is your call to action? Where do we need to go from here?

Alex Kotran, The AI Education Project Co-founder and CEO:

Right now, Steve Jobs talks about the computer as the bicycle for the mind. And right now everybody's riding a bike and some bikes are faster than others. Some students, they're at a different starting line, but they're all on bikes. And what AI is to the mind is it's a sports car. Over the next few years, there are going to be some students who are going to be trying to race on their bicycle against kids in sports cars. And that is both scary, but it's also an opportunity because it means that we can hand kids the keys to a technology they could not have fathomed. They're going to be able to create things that they could not have fathom being able to create. And all the traditional barriers aren't going to be there. A kid is interested in being a video game designer, they can actually create a video game and they'll be able to do it with natural text input, maybe even just natural voice input.

And that's already here. It's not even years away, that's already here. And so there's opportunities right in front of us, but it's also a risk. And the imperative thing is that every single student needs to learn about what is ai? Why is it important for me? How does it impact me, day-to-day in terms of the products that I use? And also, and this is the new thing, is how do I use some of these tools safely and effectively? What are their limitations? What are they really good at? We really don't have a minute to lose. What I would say is reach out to us, reach out to aiEDU. You can go to our website, aiedu.org. We love hearing from pretty much anybody that is interested in this topic. We with parent groups, we work

with school districts, we work with nonprofits, with state, federal agencies. If you're thinking about this problem and you have some ideas or specific goals about how we can actually move the needle, we would love to hear more.

Ramona Schindelheim, WorkingNation editor-in-chief:

Alex, thank you very much for joining us.

Alex Kotran, The AI Education Project Co-founder and CEO:

Thanks so much, Ramona.

Ramona Schindelheim, WorkingNation editor-in-chief:

I've been speaking with Alex Kotran, co-founder and CEO of The AI Education Project. I'm Ramona Schindelheim, Editor-in-Chief of WorkingNation. Thank you for listening.