Teaching AI-Ready Students With José Antonio Bowen (S5: EP2) (Transcript)

Rebecca: Hey Chris, here's a question for you – if I use AI to write this podcast intro is it cheating?

Chris: Hmmm…I guess not because I don't think AI could do it perfectly. You'd still have to use your expertise as a writer and producer to edit it. But, did AI write this podcast?

Rebecca: Don't worry, a human wrote this episode. But here's another question – if a college student uses AI to write a paper, is that cheating?

Chris: Now that's trickier. Aren't students supposed to do all the work themselves, so they learn the content?

Rebecca: Well our guest today says no, it's not cheating to use AI, it's actually progress.

Chris: Welcome to Work Better, a Steelcase podcast where we think about work and ways to make it better. I'm your host Chris Congdon and I'm here with our producer Rebecca Charbauski.

Rebecca: Today we're talking to Jose Antonio Bowen who is an expert in higher education, teaching and leading through change – which these days includes AI. What's so interesting about his work is that he wrote a book called Teaching Naked where he advocated for the removal of technology from classrooms and he still believes that will help students be prepared for a future with AI.

Chris: My conversation with Jose was fascinating and I learned so much. He has been on the leading edge of education for over 35 years at Stanford, Georgetown, the University of Southampton and as a dean at Miami and SMU. He currently runs Bowen Innovation Group consulting and training. He's written six books including his most recent, *Teaching with AI, a practical Guide to Human Learning,* which we'll talk about today.

Rebecca: And as a reminder, if you love this conversation as much as we do, we'd love for you to share it with a friend or a colleague and to like it so others can find it more easily.

Chris Congdon: Welcome to the Work Better podcast, Jose Antonio.

José Antonio Bowen: Thanks. I'm glad to be here.

CC: I'm excited to hear more about your work because you have a pretty amazing background in terms of your education and your work with a lot of leading organizations in areas like sustainability and AI. It feels like that really gives you a unique perspective right now. The advent of AI and thinking about sustainability in our work lives is really starting to create new jobs. In fact, I imagine a lot of the students you're working with right now are going to end up in jobs that don't even exist yet. I'd love to hear how you think that's going to influence the future of classrooms and education in general.

JB: I'll start by pointing out that the need for content has been diminishing in education for a long time. It's been a long time since you went to school just to acquire a body of information. We've long been concerned with learning to ask better questions and learning how to think, but your major has never mattered less. You can look stuff up. People were worried about the same thing with the internet. I would say, look, the jobs that our students are going to have didn't exist a few years ago. My daughter started off as a director of social media because every 23-year-old should be a director. But social media didn't exist when she started school. Four years later, you can direct it. We've had this before, and it's long been true that education is really preparing you for the unknown. Even a computer science degree used to be a degree in the iPhone one, which is not that useful when the next iteration comes out. The ability to adapt and learn new things has always been at the center of higher education. The idea that we're stuffing students full of content, what I call the sausage model of higher education, has been fading for a while. Content is still important. You can't think in the abstract; you need content to think. But it's been the case for quite some time that students will need to adapt to new information. What is going to be relevant in five years? What is the next technology? What is new information? Even historians are constantly discovering new documents and new ways of looking at the world. Education has always been about preparing students for the unknown and learning to ask better questions rather than just how to solve problems.

CC: I'm really hoping as I'm listening to you that you're not telling me I wasted all that time working on my MBA or studying Shakespeare or other literature.

JB: No, but the specific content probably doesn't matter whether it was Shakespeare, computer science, or biology. Those are bases, but there's always more to learn. Lifelong learners have always had this advantage.

CC: Yeah, of course. I feel like I'm going to learn a lot from you. You have a new book out called "Teaching with AI: A Practical Guide to a New Era of Human Learning." What do you mean by a new era of human learning?

JB: There are two components to this. First, we'll go back to the internet. The internet changed our relationship with knowledge. Before the internet, knowledge was relatively scarce but also relatively reliable. If you had an encyclopedia and a dictionary, you had access to what was mostly verifiable and true knowledge. Then the internet happened, and now anybody can post. Knowledge is now abundant but mostly unreliable. That shift is really non-trivial. The encyclopedia wasn't perfect, but there were no cat videos in the encyclopedia. Now, most of the knowledge you interact with is, in fact, false. The role of skepticism, thinking for yourself, and being able to understand what's relevant all increased in importance with the internet. This is now going to take another leap with AI. AI has the ability to create deep fakes and other kinds of images. AI is better than most people at a lot of things already. In a way, AI is changing the meaning of average. If you think my AI is not that good, okay, well then it's a C. The point is that students who do what used to be C work have now had that work devalued because AI can produce that level of work. Workers of the future are going to have to be able to beat AI at producing things. If you can't do better than AI, then AI will take your job. Being an expert, being better at something, and understanding how to evaluate are skills that have increased in value, making this a new era of learning.

CC: What you just said might scare some of our listeners. I found it a little scary that if I can't beat AI, how do I do that? Frankly, there are things that I've used AI for that I've thought, well, as a human, we could do a better job than that. But in reality, we know that AI is still kind of like a toddler in that stage of development, and it's going to get better. Talk more about what you mean by beating AI or how we do that.

JB: I don't think AI is a toddler anymore. If you're using free ChatGPT-3.5, then you are talking to a toddler or you're using a modem. You've been using a modem and you think, oh, the internet's not such a big deal. You have to use the best frontier models. At the moment, for example, Omni and Claude 3.5 are both really smart, large free models. They do really good work and are better than average, sometimes better than 80% of humans in many fields. But what we're discovering is that in study after study, AI can do a lot of things, but the expert is helped less than the novice. There are studies of people answering calls in call centers, a study from Boston Consulting Group consultants, and studies of lawyers. The senior lawyers were still the best at finding the issues in the legal documents. That's great news. But the junior lawyers were not. AI was better and, of course, a fraction of the price. This creates another real educational problem. How do I create senior lawyers? How do I graduate senior lawyers when they don't have internships? The first thing to go away is going to be the internships, the junior-level jobs, the jobs where you learn to write a press release by doing drafts, and then you have your manager edit them and say, well, this could be better and that could be better. Try again. That process of learning is now going to be short-circuited by AI, which learns much more quickly how to do an 80% level draft. The problem, which I do not yet have an answer for, is that higher education has got to figure out how to add more value. I do have one little idea, which is that I think c*ollege is going to need to be more like an internship and less about content.* At the moment, you go to college and you sit in lectures, and people feed you information and you write it down. *AI is actually a pretty good tutor for feeding you information. But what you need is expertise*. You need to be really, really good at recognizing better writing, better nurses' notes, better consulting work, or a better draft for the president. T*hat process of getting to expertise, which might require something more like an internship, is going to have to be a more central part of higher education.* Just having content is not going to be enough. In truth, just having content was not good enough in the internet era, the internet had access to more content than you ever did. So it's long been about asking better questions. Is this exactly the right tone? Is that exactly the right word I need? So w*e're going to have to learn how to work with AI to produce products that are better than just AI, and in many cases, better than just humans.*

CC: So the two combined are greater?

JB: Yeah. Well, and we have complementary skills. AI has access to all of this information. AI can do things that are more creative than we might do sometimes, but AI is not always its best editor. It writes really well in a specific voice if I tell it to write like this person or in that style. But humans will still need to do the fine-tuning, at least for a while.

CC: So I'm wondering, you've said that AI work is often not about the technology, and that might feel counterintuitive to some people. Can you explain that a little bit more?

JB: Sure. The data we're getting back so far from companies is that most of the advancements, the efficiency, the innovation, and AI is not coming from the IT department. It's true that AI can do some basic coding and some better-than-basic coding. But people in HR, writers, people who are making drafts, writing manuals, thinking of policy, doing scheduling, we're seeing lots of individual people thinking, "Oh, I could use AI to do this." S*o in some ways, the question for all of us is not "Is AI going to take my job?" but "Can AI take some tasks?"* Because jobs are made up of lots of tasks. And so for most of us, there are some tasks that we find tedious or dislike or are just very time-consuming. If I'm a manager of a store and I have 30 employees, each of whom have a different preference for what day of the week they work and what time they need to go to the doctor and all of that kind of stuff, that's a lot to keep track of in a spreadsheet. But it's a perfect task for AI, and it's not a task where I, as a human, add a whole lot of value.

I add value in relationships, understanding when somebody's feeling upset or not happy with their work. I can see the emotion. Those are places where the human has an advantage. But doing the schedule, writing the draft, finding three examples of a three-minute video on the internet, making sure my bibliography is in the right format, those are tedious tasks that AI can already do better than most humans. And so the question for most of us is figuring out which tasks do I need to do and which tasks can I offload to AI? And ironically, that's exactly the same thing that teachers need to do for students. Which of these classes that I teach or which of these subjects could I stop teaching? Because now students will be able to look that up on the internet or ask an AI to do that, and that task is not as useful. And the best example of this is from the calculator. So we still teach addition, subtraction, division, and accountants still need to have number sense and still need to add and subtract. But the reasons that we teach people math have changed, and the way that we explain why you need to learn math has changed. Fundamentally, we don't teach some things to the same degree, like long division or adding up long columns of numbers. I still need to know how to add, but I don't need to add up 20 numbers in a long column. I used to practice that as a kid, and nobody does that anymore.

CC: Yeah. So your daughter is working in social media, and my daughter is teaching freshmen business students some basic communication skills. She's already seeing a lot of educators are noticing that students are using AI, they're using ChatGPT or whatever level to write things for them. You are seeing teachers starting to figure out how to spot these in their classroom. So what do you think about, you've talked about this internship notion or what do you think it's going to be like to use AI in the classroom?

JB: Well, again, this is going to be a complicated and nuanced answer, I'm hoping. So first of all, what we call cheating in the classroom, business often calls progress. A spell checker did not make me a better speller. I am not a better speller because of spell checkers, but what I produce now looks like I'm a better speller because I use a spellchecker.

So you could forbid spell checkers, but students are immediately going to get out in the workforce and think, "Well, what are you doing? What is this? Use a dictionary? That takes forever." Literally a true story. I had a student, a full-time student in communications working, and her boss came to her and said, "You need to be faster and better. Everybody else is using AI. You're still the slowest one. Take a course to figure out how to do this." And so she goes to her professor, takes a night course, and she says, "Well, I'm here to learn how to use AI to make my…" It's a business communications course. And the professor says, "That's cheating." Well, I'm confused because my boss sent me here to learn how to do this thing. And so on the one hand, we're back to this question of ultimately the work is yours. You are responsible for the work that you produce, even if you had assistance from a spellchecker or from a dictionary or a thesaurus. By the way, a thesaurus and a dictionary are both intellectual properties that were produced by other humans, right? They're intellectual work. So the AI has helped you, but you have to make the final decisions, and you're responsible in the end. Your boss isn't going to care if you used a spell checker, a dictionary, or an AI. She's just going to care about the final quality. But we traditionally learn how to write by practicing writing, and we learn how to add by practicing addition. So the real problem again is h*ow do I produce somebody who can edit AI and who can produce amazing work without having to go through years and years of practice*? In some cases, the answer is no. You're going to have to practice. You have to learn how to add by hand. And so what we tell third graders is there's a calculator coming, but if you use the calculator now, you'll never learn to add if you make a mistake entering a number. So you have to learn how to do this. Part of the pedagogical question is, *when do we force students to do things the hard way? And when do we introduce this new thing called a spellchecker or an AI?* This is okay, now there's a way to do this. So I think the why becomes really important. Why am I forbidding you from using this tool temporarily? Because if you want to stop students from cheating, the single best way is for them to understand the value of what they're doing. So I think we have to explain why we have to think about our assignments, but it's also the case that the AI detectors are not perfect, right? Humans are not always going to be able to detect whether it's an AI. In fact, they're pretty 50/50. Most faculty, according to tests, and even the best detectors that are 95% accurate, which feels good, that's still 5% false positives.

So if you're going to use a detector, you have to understand how it works in the same way that if you put a smoke detector in your house and the smoke detector goes off, you don't run out of your house screaming fire. You go into the kitchen and see if somebody's frying something or if there's a false alarm. You go check it out first. And so a smoke detector is overly sensitive and it makes mistakes just like the human brain, by the way. And so we need to understand how to use a detector if we're going to think that's going to help us.

CC: Got it. So listening to you now in 2024, it feels very curious to me that in 2012 you wrote a book called "Teaching Naked," which I think I'm going to have to buy a copy of for my daughter for the book title alone, but…

JB: It's a metaphor.

CC: I get it. You were actually advocating getting technology out of the classroom. So how do you feel about that today? Do you still think that's right?

JB: I do. Because again, the point is that, and my last book before this was "Teaching Change" about what I call the new three Rs of relationships, resilience, and reflection. *Education is really about process*. Content is important, but we spend 90% of our time on content. We need to spend more time on the process, the thinking piece. So thinking is really about relationships, resilience, and reflection. So "Teaching Naked" was not about no use of technology. It was about thinking, where do I use the technology that's most valuable? And back in 2012, it was, well, okay, I can use the internet to find information. I can watch videos at home, or there's content I can research when I'm not in the classroom. I don't need to spend my time in the classroom being fed content. We initially called this idea the inverted classroom or the flipped classroom. "Teaching Naked" was just a metaphor that gave it a little more zing. But the idea is that humans are confused about how rational we are. We believe that if I give somebody facts, I will change their mind. And if you still believe that, I'm happy to send my father to your next Thanksgiving, and you can try with the facts. But the way humans really process is they determine first, are you one of my people? Do you have my best interest? Do you care about me? And if the answer is you care about me, then I start to believe your facts, not the reverse.

I hang out with people I like, and then I adopt their facts. And so teaching then and now is always going to be about relationships and about helping people learn to change their mind.

CC: Wow, that's so much to think about. I want to talk about a topic that of course in our world, we think about a lot, which is how physical environments, how space can help shape behaviors and help people to have better experiences. And so I know there's a lot of thinking going on about how AI and other things will change the role of the classroom. And I'm really interested to know more about what you think a great classroom needs to be like now.

JB: So I've been arguing, again, back to "Teaching Naked." The classroom with all of the chairs nailed down, facing the front says a lot about what's important. The person in the front of the classroom has knowledge. You're supposed to face the front and pay attention, and there's a big projector for you to take notes from the slides, etc. And so we've seen this evolution over the last really almost 20 years now, of classrooms that are more focused on peer-to-peer learning, on students being able to talk to each other, to move around. I love classrooms that have tables you can write on, and students sit around them. And then you can have a lot of students in a room like that, but students are doing active learning. When I do workshops, people always say, "Oh, well, is there a limit to the number of students?" And I say, no. I say, if you use good techniques, I can have 500 students in the room as long as they are set up in a way that people are not just facing me and sitting with fixed seating.

CC: That traditional lecture hall.

JB: That traditional lecture hall. So from what we know from psychology, back to relationships, resilience, and reflection, the other way to think about that is what are the three parts of internal motivation? The strongest motivation there is intrinsic. I want to do this because, one, I care, I'm engaged. The other is, I believe I can do it, I'm optimistic. And the third is, I have agency. This is the summary of my "Teaching Change" book: I care, I can, I matter. Really, you can summarize all of human motivation, all of pedagogy, if as a teacher you focus on those three things. When students care, they care about the subject. They feel it's possible; they can do 50 problems, not 500. And they matter. Their doing this is important, not just somebody doing it. I could raise my hand. I care about climate change, but I don't think you'll listen to me.

I keep my hand down, I don't participate. I care, I can, I matter. It's got to be all three. So that also works as a blueprint for how you should design the physical space as well as the pedagogy. What makes me care? Being able to contribute, talk to other students, actively do things, not just passively receive, right? That agency is totally removed when I'm sitting there writing down whatever you say. It's important what I think no longer matters. So all of that means that p*edagogy in classrooms that activate human agency are better for human learners.* That's been true for a long time. Plato and Socrates understood this. So classrooms that are not set up as information, the amphitheater here is the information here, it comes to you, you absorb it. And so a lot flows from that and a lot of creative ideas. It doesn't just mean movable chairs. It can mean all sorts of things.

CC: Yeah, I do love the "I care, I can, I matter." I think we need to bring that into the workplace too. I think there's a lot of people going to work every day that we would very much like to help them feel like they do care and they can and that they matter.

JB: And when you do, productivity and efficiency, all of those things increase.

CC: Yeah, everything follows, right?

JB: And we've been doing this. The old command and control style of management is thankfully taught less now in business school. It used to be taught a lot. And now we've recognized that human beings, that workers are human beings and that when they feel those three things, they do a better job. And so as a manager, my job is really to do the same thing as it is as a teacher, to get people to understand why this is important, that they can do this, and why their doing it will make a difference to customers or other people.

CC: Yeah. Well, I have one last question I want to ask you, which is, I understand that you have a favorite classroom someplace or one that you found really interesting, and I was hoping that you would tell us about that particular classroom.

JB: Yeah. So I do travel a lot. I see lots of different classrooms, and I'm kind of fascinated by the different ways people think about this. Actually, I was in India where I saw this classroom that was just a hole in the floor with two levels. So literally it was a hole in the floor. It was all carpeted, but there were two levels down. You walked into the classroom, there was no furniture, and there were two staircases going down into the floor. Everybody sat in a circle. You knew what to do because the only place to sit was on the floor, with your feet over into the middle of this circle. It was like one of those amphitheaters with just benches and stair steps. There was no place for the teacher, no special place. It was just a room in the round, essentially. But it enforced that by just having you sit there. There's actually a similar room at Texas A&M, only it seats 600 and it's in the round with screens all around it. But it's the same concept where the professor can be in the middle of this square at the bottom of the circle. I love the idea of thinking about, as you said, how do I change behavior? How do I change mindset with the physical setup? This is certainly true at the office. How do I make the office feel like a place I want to go, not a place I have to go? What we're trying to do with the physical layout of offices and classrooms is get people to think about this as a place where they could be creative, where they could be productive. Those are examples of places that are trying to encourage behavior by giving people a physical space that makes them think differently.

CC: Well, I think that classroom sounds pretty provocative, and I know we've been doing a lot of work on similar concepts, maybe without it being just a hole in the floor, but ways to get people interacting and being active in the whole process. Jose Antonio, this has been such an interesting conversation and I'm very grateful that you joined us today on Work Better. So thank you for being here.

JB: I was glad to be here. Thank you.

Chris: Rebecca can you tell us who's on the show next week?

Rebecca: Next week we're talking about our disappearing attention spans. Author Gloria Mark found that we can only pay attention to a screen for 47 seconds before we get distracted. She talks about why and offers a few tips to help us find our focus in a world of distractions.

Chris: Hopefully our listeners can pay attention for more than 47 seconds!

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Thanks again for being here and we hope your day at work tomorrow is just a little bit better.