



Podcast Episode #22 – Effective project-based learning from astrophysicist turned entrepreneur, professor, with Joshua Spodek of NYU, Spodek Academy, USA

RAW TRANSCRIPT OF INTERVIEW

Balint: I'm thrilled to talk to Joshua Spodek, professor at New York University in the U.S. and owner at Spodek Academy. Welcome, Josh, to this episode.

Joshua: Glad to be here. Good to talk to you.

Balint: Josh, you do so many things. You wear so many hats, apart from what I just mentioned. You're a packet of energy. You've done six marathons. You're exercising every morning, taking cold shower, hundreds of cold showers, besides teaching at universities as well and at corporations, writing books, you've written now one book, which we will talk about as well. It seems like your day really has 48 hours. How do you do that? How do you warp time elongating it like what astrophysicists study as well?

Joshua: Well, there's a couple of answers to that. One of the big things is that you're talking about things that I've done over the course of decades, so in 20-30 years you can get a lot done. A lot of the stuff of these things, different things for me is really not different things. It's me just always doing what I feel is the best thing to do. And like doing physics was...I really loved it. And so how could you not do what you love? And other people were doing things that they loved at the time. I just haven't felt... I think a lot of people do stuff that is, how do I put it, stuff that they're not going to really remember, that they feel compelled to go to work and do things that I've found ways of not doing some things that aren't really that meaningful.

If you want to write a book, it's really easy - write a book. There's something that hit me recently because so many people ask me this like, "How do you get so much stuff done?" and swimming across the Hudson River, that's like a.... I'm really happy with that achievement of mine but it only took a couple of hours in total from when I left my apartment to when I got back later, it took a few hours. Anyone can do it and the way to do it is this: swim across the Hudson River. I mean most people listening to this live in a city with a river, you just swim across it.

Balint: I think many times people have a problem that they have a goal and they have problems putting the goal into action. This is what we will also talk about during the podcast. I don't want to jump too much ahead. So a little bit of a story on how we



first got connected and how we are connected in a way, before we jump into all of these topics.

Joshua: Yeah, I really am glad you're going to say this because I really like how we met.

Balint: Yeah, exactly. We've connected via Twitter and I follow one podcast, one of the many podcasts I follow, is "Innovation Ecosystem" by Mark Bidwell who also actually lives in Switzerland. I've never met him though. And you got featured there in the podcast recently. And that podcast is about also very important topics - innovation for big corporations, for smaller ones, and that's how we basically got connected. And as for our further connections a common background we share, which we found out pretty fast, is that both of us has a Ph.D. in physics. And also we have some more connections with Nobel Prize winners because you did your Ph.D. under the supervision of a Nobel Prize winner, as far as I know.

Joshua: I have to correct you there. It was undergrad that I worked with a Nobel Prize winner.

Balint: Undergrad? Okay. Okay. Yes. And I had also a connection with Ted Hänsch, physics Nobel Prize winner for the frequency comb. He was on my Nobel Prize committee, not Noble Prize Committee, the defence committee. And we share also other things, like the entrepreneurial thinking. You, Josh, you are even teaching about it. So I think it was fascinating connecting with you.

Joshua: Yeah, we have to add also that both of us were into experiential active project-based learning as a style of teaching as opposed to lecture-based or content-based.

Balint: Exactly. Yes. I will allude to that a bit later in the episode because this is a very important topic we should discuss. So before we go into all of these topics, because this podcast is mainly concentrating on hardware topics, hardware related entrepreneurial topics. You had one company that you pointed out to me and I found it very interesting. And that was a startup some time ago that you founded and it would be great if you could tell us how you started out with that, also what kind of motivation you had to start the company, how you validated the idea. So can you tell us the story of that?

Joshua: Sure. I'll talk about the motivation first because it's relevant. I was in graduate school and I started physics, loving physics. I still love physics but the life of a researcher was just a lot more debugging. It wasn't what I expected. It wasn't the kind of research that you did 50 years before when you could build a particle detector and find stuff. And so I realized I wasn't really going to enjoy the life of a physicist. And at the same time...Oh, and the options available to me if I didn't want to keep doing it, I



felt like they were either going in the industry or going to Wall Street, and I didn't really want to do either of those things, or keep doing what I was doing, I didn't do that either. So I was trying to figure out what to do. And it was the mid-90s and some friends of mine from undergrad said that they had been meeting because they wanted to start a company and they were just saying there was this meeting for beers and see if they could come up with an idea, and they said, "Let's bring Josh in." And so, the three of us would meet for beers and we talk about ideas. And I had an idea and okay. So is it fair to assume that people listening to this are mostly technical and they have hardware background and maybe some math?

Balint: Yes. Yeah.

Joshua: Okay. So I knew about a device called zoetrope. And actually, I don't know if I ever had held one in my hands, but a zoetrope is a cylinder with slits cut in the side, and when you spin it and you look through the slits there are pictures on the inside and they look animated. Usually, I think of a horse galloping. And I was playing with it with the idea of them and I thought, "Okay, the slits seem essential to this. The pictures seem essential. The circle didn't seem essential." And I wondered if it had to be a circle for it to work. And I thought, "What if it were straight instead of round?" Which with some math background, the way I was thinking was instead of thinking in polar coordinates, why don't we switch to rectangular coordinates? Instead of R theta, what if this was X and Y ? And it seemed to me that if it was in a straight line, it should be able to work. I didn't see why it wouldn't.

And then, I very quickly thought if it was straight instead of round, if it's round it can go as long as you want. You keep spinning it. The animation has to repeat but you can make it go as long as you want. But it was straight, you could make it go as far distance as you wanted, you can make a non-repeating image. So I thought, "Where do you have people going on in a straight line for a long time?" And it didn't take long...I thought of cars and I thought of trains. And then, I quickly thought, "Oh, we could put it next to a subway and put an animation there, and we could show little short movies, we can make commercials next to subways."

So at the beginning I thought you could make art with it, you could make images for.... But the big thing was the commercial application was to make displays to put in subway tunnels and it didn't take long for me to realize that in subways you have a very high density of people and advertisers pay for reaching a lot of people. And then not long after that we realized that if we were to sell this... If we were to somehow do this with the subway system, we can help the subway system make money off of their real estate, which is downtown. So in New York City that means Times Square. So we could put up a Times Square billboard under Times Square where no one's doing anything. So it seemed like a great idea. And the idea came in 1996 and one of the two guys ended up moving to Boston to get married. So he didn't do the project.



But the other one and I we started the company, and it took us a long time to get these models working. And that's a very interesting story of trying to get it to work, things that worked and things that didn't work, and learning from mistakes, and things like that.

Eventually, we got it working well enough that by 1998 we filed for the patent, in 1999 we got our first funding and then we were off and making this happen. But that's the basic, the beginning of it. And I don't usually get to tell that. I'm really glad to talk about this like changing from polar coordinates to X and Y.

Balint: What was the timeline for coming up with this idea? Because you described it that you were looking at this cylinder how you could then map this along a straight line. And then, as you said it, you saw some applications, trains, cars, subway, then the commercial application.

Joshua: It's hard to answer this question now because it's been so long, it's been over 20 years since the original idea. So I'm not sure how much of my memories are the actual memories or memories of memories of memories that have gotten distorted over time. What I think happened... I don't think I actually ever played with a zoetrope in my hands before having this idea. I think that I was just thinking about them and I mean, to the best of my memory, the idea to switch from a circle to a straight line. I think from then to the idea of the subway tunnel was like almost instant. It was just like the question of, "What if I switch coordinate systems?" is kind of a natural question for someone who's been doing a lot of physics and math. Some problems are really hard to.... Especially if you've done partial differential equations, some things if you solve a problem in polar coordinates, oftentimes you look really quickly, "Okay, could I also solve a similar problem with rectangular coordinates?" and sometimes it often works really simple. Or if you switch from polar to spherical, or something like that. So oftentimes a solution of one means you've got another solution in another. And so I saw something that works in one, and for me it felt very natural having taken electricity and magnetism to try to look in another system to see if would work there too.

And to jump from there to realize that you can make it as long as you want. I think that was also within like a second or two of having that original idea. Like to think, if I'm thinking of something that you can hold in your hands, then a circle one, then if I have a straight one, it's not going to fit in my hand. I mean, if it's like a second long, it's not... If I want to make a long animation, it's going to be really long. So I realized that it had to be long. Anyway, so all that happened really quickly.

The stuff about the business model. It took us years to figure out what the business model would be. Are we going to build these things and sell them to outdoor advertisement companies? Are we going to be an outdoor advertising company ourselves?



Are we going to charge the subway system or are we going to charge advertisers, or we're going to charge viewers? It took us a long time to figure out what the business model would be before finally settling on. In retrospect, it's obvious we were just going to be a billboard company, just with different... Our landlord was going to be not a building where you put a display on top of the building, it was going to be the subway system. But we would share revenue with them and enable them to lower costs, hopefully, or offset costs.

Balint: And you were optimizing it for different speeds, to my understanding, so that viewers, the customers, can look at it with different speeds. So there was also some development, as you mentioned it, because you came up with this in '96 and then 98-99 when you were filing for the patent, you said you were basically doing the prototyping, so doing the tests, and also now you mentioned the business model, validating it. So all of these things took time, right?

Joshua: Yeah. The testing was...I mean, now I would do it very differently. At the time...Oh, man. This is one of the problems with learning physics at school was that I thought I approached a lot theoretically and I tried to figure it out by hand. And finally... We probably spent a year building models based on my understanding of how zoetrope worked. And there were all these little details that in retrospect were obvious but, well, that's the way math and physics always are. It's always obvious after you get it, it's like, "Oh, it's obvious."

And, ultimately, what made it work was I went back and built a working zoetrope, which is really easy to do. I mean, they exist so to reproduce something that already exists is really easy but when you actually build it with your own hands, you start releasing little details. And then, I made small changes to that and instead of trying to jump from circle to straight, I should have done circle to slightly different circle to a slightly different circle and made lots of little steps, trying to make these big steps based on the theoretical understanding that turns out to be wrong. That was a mistake. Well, I mean it's how I learned. It's one of the reasons that I value physics so much as an experimental science as opposed to just theoretical. I used to look at it much more. I still value theory so much more than experiment. Now I value experiment much more... Not more than theory, more than I used to.

Balint: For me it's also a little bit similar because I started out with the wish to become a theoretical physicist, to do theoretical physics, and during my Ph.D. I switched to experimental physics. Anyway, I was in an experimental physics group so it was logical that the facilities were there, the funding, help and so on. But reality is actually obtainable with experiments. That's the truth. And that was attractive to me. And this was also one of the reasons why I changed the experimental physics. So you also mentioned that you started to value more with time experimental physics because you were doing these prototyping tests and so on.



Joshua: Yeah. And I look back at the history of physics and we value theory so much because that's what gets in the papers. But I mean any theoretical discovery if you trace it back it, all comes back to experiment. And a lot of the experiment, actually, a lot of it comes from people doing business. I mean, it's... Let me see how fresh this is in my mind. If I look at like String theory or some whatever the latest theoretical stuff is, if I trace it back to Quantum, I trace that back to blackbody radiation, I trace that back to try to understand what gases are made of, when I trace that back ultimately I come back to a steam engine of trying to get water out of a mine in order to dig for coal and someone's trying to make a buck. And I think a lot of the stuff that we think are so high, faluting high, so amazing, if you really trace it back, it comes back to people doing regular everyday things. And I value that regular everyday stuff a lot more than I did before.

I mean I'd certainly like theoretical physics but I think there is... I guess I'm thinking because recently I read Physics in Reddit, and every now and then people will post what do you need to learn to... What do I need to study to learn physics very well? And people are always telling all these books to read and all these theories to learn. And every now and then I'll post, "Don't forget to do some experiment" and I get downvoted. I'm like it's not a branch of math, it's about the universe and it's about stuff, real things. And I feel like people miss it and I don't know, I think that's where... I so much more value now experience and doing things, and touching things than I used to.

Balint: This relates also to your style of working and teaching, to my understanding, that you talk to customers, which is also basically a business experiment, so that you can learn the truth what they want and what their reactions are.

Joshua: Yeah, I would say it's slightly different. I would say I learn what they want. I would take out the part about the truth because that's a philosophical way of saying, I just want to find out what they say they want and I want to deliver what they want.

Balint: After having your company and your Ph.D., you changed directions, so you were experimenting and exploring other things in your life. And can you tell us why that happened and how you ended up doing what you're doing right now?

Joshua: I talked about the switch from academia into the business world. So if you mean from the business world of entrepreneurship into teaching leadership and teaching entrepreneurship.

Balint: Exactly. Concentrating on that.

Joshua: Well, I wish that... I'm laughing because I don't want to start crying. But I mean the business idea, a lot of people really loved it. We got some investment and so forth. But in the good times it was great when the market was going well but we



had the triple whammy of 9/11 happened on our launch day. I had these invitations that went out. It was saying to people, investors and so forth, "We're going to this big global launch of our new medium in Atlanta. Please come." And we did this, by the way, with our PR firm to pick a great day that we get lots of press and stuff, and it says, "Please come to this global debut. September 11th, 2001."

And it's just a weird thing to read now. So obviously we did not launch that day and of all the things that happened in the world, our not-launch was not the biggest thing but for the companies it was devastating that we didn't get to launch. Then advertisers pulled out. It was very difficult to go into subway systems at this point. And soon after that we hit a recession and the late 90s tech bubble burst, and we weren't part of the bubble but we still got affected by it. So this company that was doing really well, suddenly we couldn't build displays, we couldn't get investment, no one was advertising.

We couldn't get into the tunnels to build up new displays. So it was a really difficult time. So we were just watching money fly out of the company because we had salaries to pay and things like that, and patents to pay for that stuff. So I got squeezed out by the investors, which was... This is where it was just a very painful experience that I learned a lot about the world. Let's put it that way. And, suddenly, I was not welcome at my old company even though I'd done the best job that I could and was always doing what I believe was right for the company. But we were running out of money and I didn't know what to do, and the investors didn't want to keep... They wanted to protect their investment.

So there was now no longer making money from the company that I founded and I still had to pay for my apartment and I still to eat. So I had to make money so I went off and worked for a defence company and that made me money for a little while but it mainly taught me that I really wanted to keep starting my own companies. But I didn't want to be limited by my own experience and I applied to business school and got in. By the way, I should mention that when I was in graduate school and getting my Ph.D. in '97 – '98 on Columbia's campus the physics department is almost right next door to the business school. So without telling my adviser or my classmates, I would take classes at the business school and entrepreneurship. And not even registering. I would just go to the professors and say, "I don't want this on my transcript because my adviser might see it and I don't want... I might not leave physics at this point." So it was kind of secretly taking these classes.

But by this point I've taken five classes there, or audited five classes I should say. So I figured I'd I'll go to business school and I'll take classes there and that will help me learn about finance and things like that, the stuff that I didn't know, and I applied, got in. It's easy to get into a school when you have professors from that school writing your recommendations because you did the work for their classes voluntarily. So I went in thinking I was going to learn accounting and finance and the hard skills, and



within the first week, before classes even began, during orientation I was deeply humbled thinking, “Oh, I know all the math, I know way more math than anyone here needs to know. I ran a company for a couple of years. This is going to be cakewalk. I just want to... It's going to be like give me a few little details but basically it's going to be really easy.”

And quickly I realized, one, finance and accounting, this stuff is not... It's not an issue of... It's still addition and subtraction, and that's not the issue. It's a very different perspective. But the bigger thing was that there's a whole emotional side of business or the relationships and the personal side that I was completely blind to. And I started to pick up when I was writing the patent and doing the business plan and getting investment, but I really I knew the tiniest piece of it. And so, when I started business school I was like, “Oh my god, there's a whole other side of life that I missed.”

So the leadership classes, the entrepreneurship classes, there are more to take negotiation, consulting, some of these things. It woke me up to things like empathy and emotional awareness and various emotional skills that I just didn't know about. Even as much as I learn in business school, looking back now I would say that business school opened the door to this side of life but because the way of learning was mostly through case study and reading psychology, and lectures, and writing papers, it just told me the stuff was there. But I think to learn social and emotional skills, you have to practice, you have to do things. This is what I say now. I didn't realize this at the time but it wasn't till after leaving school going out in the world trying to put stuff into practice that I only learned through lecture and case study it wasn't effective.

So then, for years after business school I was now putting stuff into practice that before I had only known theoretically. So then after practicing it for a while, then I started sharing it. I mean people could tell that I was changing and my friends would tell me, “We like this change, your skills with relationships and so forth are getting much better. Your advice is getting much better, you should coach, you should teach you should write.” And I started doing that but it wasn't until I started learning about project-based learning and how we teach other fields that are less theoretical and more practical, that that style of learning that I learned was better than nothing but way less effective than other ways.

Once I started using that style of teaching, which I didn't create from scratch, I just realized other places taught much more effectively than leadership did. I started bringing what... I think as an entrepreneur this is like a great entrepreneurial practice. Just find something in one market that works very well and if you've identified another market that has demand for the same thing but doesn't have it, bring that over. And that's what I'm doing is I'm bringing the practices of other fields into leadership and finding that it works much more effectively. I don't know... Is that too much of an answer?



Balint: No, no, no. Yeah, I agree that entrepreneurship, a big element of it is how you can bring other ideas from other geographical areas, other disciplines, combining things, synthesizing so that you come up with a really new thing. Of course, knowing also what's on the market. And so this is how you basically got to this leadership style or teaching of leadership by practice. Thinking about it the quote from Paolo Coelho comes into my mind, which says, "There's only one way to learn, the alchemist answered, and it's through action." So I agree.

I also came across this project-based learning and I talk about it in episode 1 of the podcast that this is the future of education because also in hardware you have these hackathons, the whole maker movement which is based on acquiring skills for your project that you create or others create, and in like lego you have a certain theme and then with the elements you build it. You get skills for soldering, how to solder, how to use these kits, development kits, Arduino, Raspberry Pi, and this way, slowly, even as kids, so not only adults, can quickly, more effectively pick up skills and learn new stuff. So I'm really fascinated about it.

And you've recently published a book with the title *Leadership Step by Step* where you apply this that your acquired knowledge from teaching and from consulting. And as I see it it's been recommended by no other than Seth Godin, Daniel Pink and I've read the reviews. I have to say it's quite noticeable that it's shooting through the roof, the reviews on Amazon. So I haven't read it yet, to be honest, I've seen some use of it. Can you explain, can you, so to say, sell it to me and to others? I'm already attracted to it, to the whole topic and to what I think is inside, what I've seen reviews and the modules. Can you tell us more about it? Why you think it's different? What it brings?

Joshua: Okay. So I alluded to other fields that taught in different ways than leadership and I'm really using techniques that work very well in other fields. So one of the big things that got me to realize that the way that I learned leadership was not as effective as it could be was actually watching the show called Inside the Actor's Studio. I don't know if you guys you've watched it out there, episodes are available online, and it's this guy James Lipton, and he interviews all these great actors. So I mean all the great ones – De Niro, Pacino, and Streep, and so forth.

And I was just watching it for entertainment. I wasn't looking for inspiration. One of the things I noticed was that actors have social and emotional skills that leaders wish they had. I mean incredible. Their empathy, their ability to connect with people emotionally is incredible. And if I compare how Johnny Depp expresses himself with any MBA, or for that matter any leadership professor, there's no comparison. I mean there's no comparison. It's not even in the same ballpark. So I'm watching it. And the more that I watch, they keep talking about their backgrounds and I keep learning that most of them, I don't know if most, I mean a lot of them, maybe most dropped out of



school or were kicked out of school, and I'm thinking, "Wait a minute, the people I went to the pinnacle, I went to an Ivy League business school with professors, who are some of the best professors in the world, with classmates who are some of the best classmates in the world and we're totally outclassed, every one of us, by these people who got kicked out of school or dropped out of school.

What happened? How is this possible? And the more that I watch, the more I realized that they didn't go to traditional education. They didn't get traditional educations. They did keep learning and the more that I watched, the more that I kept hearing names like Stanislavski, and Stella Adler, and Sanford Meisner, and Lee Strasberg, and I learned more and more about what we now call method acting, and I realized that they have a very disciplined, very focused, very intense way of learning. It's just very exercise based.

So I started researching and researching how do actors learn, and the more that I learned, the more I found that they start with this... It's a set of exercises that begin very simple and the more that you learn, you master the early stages and you get to more advanced stuff, and when you master that, you get to get more advanced stuff, and eventually you master the field. But people are always practicing. And it took me a while to look back and realize that's how you learn to play a musical instrument. You start by playing scales, or playing chords, or something like that, and you start with simple and you move up to more advanced, you move to yet more advanced and so on like that. It's also how you learn improv. It's how you learn any sport. You don't learn tennis by reading the rule book, you'll learn tennis by learning theory, you learn tennis by hitting groundstrokes; after you get the groundstrokes, forehand and then you go to a backhand, and later you got to approach the net, and much later you start doing the serve.

So I looked at it like what are all these fields... All these fields, I realize that they're active, they're social, they're emotional, they're expressive, they're performance-based. And all of them you learn through this practice of what I call... I now call it method learning, in honor of method acting is that you learn through practice, you learn... And it's not just when you learn to play the piano, you are not just banging on the keyboard randomly, you're pressing the keys in a certain way that your teacher tells you how. So there is theory. The teacher has to know the theory. The practice has theory in it. The exercises that the beginner starts off with, experts came up with that, experts who knew the theory very well through their experience. They've come up with these exercises. So if you learn how to play musical instrument, if you learn how to play sport, if you learn how to sing, if you learn how to dance, we all know how to begin. No one begins with lecture. Only leadership. Leadership is also active. It's also social. It's also emotional and expressive, and performance-based. It's the only one that I could think of where we start with teaching the theory for a couple of



years before we start putting into practice. There are no TED Talks for how to play tennis. Because we know how to do it. You got to hit the ball a lot of times. There are TED talks on how to do leadership because we don't know how to teach it.

So that was a major thing that I realized that what was missing from leadership was the equivalent of scales, the equivalent of hitting groundstrokes, the equivalent of footwork in dance. So there are lots of people who teach, like improv for leaders or jazz for leaders, or orchestral conducting for leaders. Those are really valuable not because they teach you leadership but because they're experiential, because the type of learning is very useful. The problem with them is once you learn, say you take a class in improv for leaders, it's going to improve your leadership. But what do you do when you do really well? Do you take more improv? Because if you keep taking improv, it's going to take you more towards Saturday Night Live or performing on stage away from leadership.

It turns out if you look at leadership, there's more than enough practices in leadership that if you teach them, if you turn them into exercises and give people those exercises, they're going to learn leadership like musicians learn music and actors learn to act. And if you look at actors and musicians, they have tremendous, the good ones, the ones that are playing in Carnegie Hall or the ones that are winning Oscars, they have tremendous authenticity and genuineness and openness and things that leaders wish that they had. And it comes through this performance and through this going through stages, and stages, and stages of growth that you simply will never ever get by listening to lectures. You cannot lecture integrity into someone. You cannot watch enough TED talks or read enough books to get authenticity, to get experience. In fact, if you look at the behaviour that you get when you listen to a lecture, the behaviour is sit there and listen, it's compliance. Very few leaders will say one of the top skills to have being a leader is to comply to others. It's much more about doing things and when you do performance, those early performances of playing a sport or a musical instrument, or whatever, you're making more mistakes if you're doing things well and that's what you learn from. You don't learn that when you're writing papers; when you're writing papers you're learning how to write papers. But very few leaders say it's very important to write a lot of papers as a leader. I mean they have to write stuff but it's not... it's really the social and emotional stuff.

Okay. So that was one big thing was seeing that. Another big thing was my visiting my friend's school in Philadelphia that he was the founding principal of, which was a project-based learning school from the ground up. He traces his roots back to mainly John Dewey is a name that he talks about a lot. And I went to the school because he had started it a few years before I was... I visited it one time because I knew that the first graduating class of his school Barack Obama spoke to, Bill Gates had visited the school. I said, "What's going on with this guy? My friend's school it's like really getting



a lot of press.” So I visited one time and I'm talking to him outside the principal's office, because he's the principal, and he says, “Do you want to tour the school?” and I say, “Yeah.”

And he stopped some student walking by, just a random student, and he says, “Are you busy?” And she says, “No,” and he says, “Do you mind giving Josh a tour of the school?” She says, “Sure.” So she's walking me around the school and this is a 10th grader, so probably 15 years old, and she's talking about the school in a way that she knows the processes of how the school run, she knows about the relationships between the principal and the teachers, and the teachers and students, and the students and the principals. And this sounds like she has a really strong command of leadership, this sounds like how we talked about businesses in leadership class.

But in leadership class we're studying leadership. I know that they weren't teaching leadership at the school. She would take chemistry and math, and whatever, the regular classes that high-school students take. And then a year later I visited the school again because he has this annual Educon. And so every year he has people come in and there's a whole community that comes, and I see the school again and again another tour and another student is equally impressive. And so I started learning of what is project-based learning because at this point I haven't learned anything about it. And I tap into his community and I start learning about the... In short, how you learn is as important as what you learn so you can teach people leadership but if the behaviour that you're enforcing is compliance and reading and writing theory but not actually doing things, you're not going to learn how to do, how to practice leadership.

And so I started learning about how the style of learning works. And if you want, I can go into more depth but it's a different approach to learning, it's learning... It's your starting point is what do I want... It's starting with the student as opposed to with the content. And what I want the student to learn and be able to do and working backward from there. So these were the two main things of seeing how we taught other fields that to my view are very similar to leadership but we don't approach with traditional academic passive approaches. I mean, well, intellectually active but socially and emotionally passive, and then tapping into this more than a century old practice that John Dewey and Maria Montessori and others have done, in going back through the ages, it's a style of teaching that I just didn't see in leadership, and so I took those fields and brought them into leadership.

I'll add one more piece which is Marshall Goldsmith who is my mentor and he uses exercises so I saw from him exercises that he used with leaders and his leaders when he works with leaders, we're talking like Fortune 10 CEOs. And he had practices that were like scales. He had a few of them, and as I started developing the stuff I developed more and more practices, more and more exercises that were like his quick to learn, easy to do, or I should say simple to do, not always easy, some-



times hard. And rounding out, in my book I used two exercises that came from Marshall Goldsmith and there's 20 exercises, so the other 18 I got from other places, either ones that I made up or from other places, other sources that have been around for a long time, with the goal of making it work as well as method acting once did for acting.

So that means no big jumps between them. So I had to put in all these little gaps, to fill in all the gaps because when you have a big jump from one exercise to the next, that's when people get anxious. Fill in the details, if you want to exercise. And the next one is much harder. To get people to do the much harder one, it's more effective to have two or three middle steps in between. So I'd make exercises there in-between the simple ones and the hard ones so that students wouldn't feel such anxiety. So, anyway, summing up it was seeing how he taught other fields there were active, social, emotional, expressive and performance-based, seeing how using project-based learning, experiential active project-based learning, and then looking at a role model of Marshall Goldsmith and putting all that together, plus the practice of working with my coaching clients and working with students.

Balint: Excellent. What's the reception? So people like it very much?

Joshua: Oh, man, I'll tell you that the first time that I did it was I went to Educon, and I went there Friday, Saturday, Sunday and my first day of teaching entrepreneurship, there's one class in entrepreneurship, was going to be Wednesday. So I went there Friday and I had a syllabus ready and I started meeting these people and I was talking to these teachers who taught this way for a long time. And I realized I'm going to change my syllabus. I have three days working with this community here where I've got lots of people at Educon, of all these teachers who taught this way. I have a tremendous resource. I'm going to change my syllabus in three days.

And so I had to change it as quickly as I could and every time I made a change, I would talk to someone there. I just like stopped people in the hall and say, "What do you think of this?" Not in the hallway but I talked to people sitting at lunch and so forth, and they'd say, "Try this, try that." And they helped me fix it. So by Sunday afternoon I had a new syllabus. So then Monday, Tuesday I changed a little bit. Wednesday I taught that class. I got almost the highest reviews from students in the entire school and the people that got higher were tenured faculty who'd been there who had tremendous resources and I didn't really have a whole lot of resources as an adjunct faculty. So from the very first time that I did it and, by the way, I was still learning in that time, so I was still making mistakes. I'm still making mistakes. And I get reviews that are... I mean you read the reviews, the reviews are students consistently say, "I've never learned anything like this before. I didn't know that I couldn't get things like this before. I wish that there are more classes like this and I want to take more." So last semester I taught leadership and the students in the class said that



they wanted more stuff from me and we all knew that if I went through the bureaucracy at NYU, it takes semesters to make a class happen. So they just said, "All right. We'll put it together." So one of the students put together for me to teach another class to the same students and it was independent of NYU, it was just we would get together and it ended up being in one of the students' apartments, and I just had a whole other class to them because they wanted more stuff from me and they didn't want to wait. So that's to me people putting their money where their mouth is and making things happen like that. That to me is a sign that they like the stuff.

Balint: I got one question from one of the listeners. Let's say this question is crowd-sourced. So the question is that there are these methods that you now described, Montessori learning teaching methods and for teaching to become more entrepreneurial in thinking and also teaching creativity. How do you think the system that we have around us can incorporate all of these different methods? Because our whole education is completely different. It's coming from the industrial revolution times, relying on manufacturing, manufacturing workers, educating in batches, same class, same age, same speed that they expect from the students to follow. Well, how do you see this?

Joshua: There is a conflict between the current educational system and this style of teaching. And when you talk to teachers who teach this way. In the United States K-12 teaching there's a lot of teaching to the test and it's very frustrating for them to teach in a way that they can clearly see as more effective. I'm not sure if it's effective for everything but certainly the teachers that I talked to they say it's more effective for what they teach. I'm not saying it's more effective for everything. So I'm only speaking about my experience and the experiences of people I've talked to, and a style of teaching that is pushed on them by a bureaucracy whose goal is accountability but not based on student... It's based on test scores, which don't necessarily correlate to improving students' lives.

So there is a conflict between this style of teaching and the predominant method of teaching. One of the big things that I'm doing is trying to change the style of education that we have because I see the outcomes and I'm not trying to change everything but certainly how we teach leadership, entrepreneurship, sales and a lot of the soft skills of business. So how will we incorporate it into the traditional style? I believe it will retreat away from some areas. I mean if I look at acting. Acting was taught a certain way before Stanislavski. No one in the world teaches acting today like they did before Stanislavski. It is simply not done anymore. There is no one in the world who would take classes in how to play piano from someone who suggested to learn the theory first for years in a classroom with a teacher and chalkboard, no one would take that class. And I believe that in the future no one will take classes that say the



way to learn leadership is to watch a teacher lecture or to watch TED talks or to read books on theory in the absence of actually doing things.

So I mean, I think the system is going to change and I think a part of me wants to be an agent of change to... I don't like going up against big bureaucracies that are making a lot of money. I mean the schools that I work with, NYU and Columbia, are very successful schools and to try to change them is not easy it's much easier to get hired if you want to just do what they already do. But that's not effective. Ultimately, it's the students that I feel most responsible to. So I want to change that. And that's part of the reason why I offer my courses online independently of any... If you go to spodekacademy.com, you can take my leadership class. It's the exact same course that I teach, exact same materials, exact same exercises, in the same order, using the same software, same with my entrepreneurship class, and it's because I feel responsible to make these available to the world. And it's going to take a long time for the schools to change.

Balint: Yeah. I'm amazed by your optimism. It's huge. But one has to do it step by step. This is what you're doing. You're one of the persons that are also, I assume, other professors in the world similar to you and you were talking about these methods. So there are definitely more people who are pushing this and step by step, it has to be possible, just like in project management it's now shifting slowly to agile-based, in software it's already like that, there's no more waterfall and I had one interview with Joe Justice from Scrum Inc. who is an advocate for hardware, scrum for hardware. And he's already seeing the change happening. So change is possible. Just as also your book explains, step by step, so that people don't get too frightened and then paralyzed to do the next step.

So Josh, I would propose now that we should move on to the last round of questions. This is fascinating. I really enjoy this conversation. Just this part would be slightly different. And I'm going to be asking four questions and it would be good to get short answers. So the first question, again these are not related so much to the previous things we discussed but we will see what the answers will be. If you could time travel, just like at the beginning I mentioned time warp, if you could go back to the past when you were younger in your 20s, what would you do differently or what kind of information would you give yourself?

Joshua: It would definitely be to learn... I was blind to the social and emotional aspects of life. I just thought learn more facts, get ahead by knowing the rules better. And I think to learn how to relate to people and to understand myself better in an emotional sense. At the time, emotions were just these weird things I didn't get, the reason was rational, emotions are therefore irrational, and therefore couldn't be understood. That's how I thought about it then. And that's not how I look about it now. And I actually give my book and say do these exercises.



Balint: All right. The second question: if you had to name one book, apart from yours, of course that had a big impact on your thinking, what would it be, especially your entrepreneurial thinking?

Joshua: So there I'd have to say *Getting to Yes*. That was the first book that made me see a human side to business and to change from thinking businesses was about money and getting ahead and cold hard facts and stuff like that into being, "Oh, I wanted to understand the person on the other side of the negotiation to make a better deal to work with them, to like them, and to not necessarily like them but to like working with them. And then, *Getting to Yes* I keep coming back to.

Balint: All right. I haven't read it yet. I will put it on my backlog for books to read. The third question, it's about habits. So you do have some habits, I know that. What kind of habits do you have?

Joshua: Yes, I'm smiling when you say that because people who read my blog know that habits are extremely important, and not just habits like brushing your teeth or reading the paper but here's my term: self-imposed daily challenging healthy activities. So SIDCHA, S-I-D-C-H-A. I don't mess around with my habits. Every morning I do my Burpee routine, every night before I go to sleep I do my Burpee routine. I write my blog every day. Ok, so just to say what my morning routine is: I wake up, actually there's one that I haven't written up. I wake up and my rule is that I have to turn off my alarm within one minute of it going off because I used my phone for my alarm and I put it away from my bed so I have to... It's set for 6:15 so it has to say 6:15 when I turn it off because I used to spend like half an hour in bed before I got up. So then I go over and I put the... Tell me if there's too much detail but look, I know I'm going to do some crunches in a little bit so I put this pad down on the ground. Then I go to the bathroom. I raise the window shades and then I do depending on what type of Burpee I do, if I'm doing diamond pushups or regular pushups. I do 27 Burpees, then I do a whole bunch of crunches, then I do some stretching. Then I do some back exercises, then I do some curls. Then I water my plants, then I make my breakfast which is the same breakfast, well, it's oats, chia seeds, water, nuts and fruit, so the fruit changes.

And then I sit and read while I eat. It's the exact same thing that I've been doing for years, and years, and years, and I love... It is the foundation for everything else working. And then, at least once during the day I write a blog post so I have not missed a blog post. I haven't missed any of this stuff since January 2011 is when I started the blog, in December 2011 is when I started doing the Burpees.

Balint: Amazing.



Joshua: And yeah, I don't miss these things and I got to tell you it is the... I think of all the things that I contribute to the world. This concept of a SIDCHA is I think going to be the most important thing in the long run. I think that, and sorry if I'm going on too long, you said short answers, but I think that if you don't have structure in your life, to me try to improve stuff when you don't have structure is like running in the sand and habits are like running on solid ground and a challenging habit that it gives you discipline to practice and not letting it slide. To me, it's like the difference between building in sand, I'm switching from running to building, to building in like solid bedrock and if you want to build a skyscraper, if you want to build a tremendous structure, you need bedrock. And this gives it to you. Sorry if I went for too long.

Balint: I need to pick up some of these. I have the bad habit of the alarm goes off. I put it on to sleep mode and then I wake up maybe five, ten minutes later. Not so bad, not half an hour. But it definitely would be more effective to get up a lot faster.

Joshua: That one came from the students from last semester. One of my students... One of the projects in the course is to change one thing about your life. And this is based on some of the stuff that's in the book. And one of the students was saying she had a hard time waking up and I was saying, "You believing it's hard is one of the main things that's making it hard. If you change that belief, then it won't be so hard." And as I hadn't really made a... I didn't have a goal of getting up faster but my saying to her that it's easy, that believing it's easy makes it easier. I thought, "All right. I'll try it myself." And it became easy and I mean having done stuff from the book a lot changing beliefs is hard at the beginning for most people. But once you develop the skill, it actually becomes really easy.

It's like dexterity with your mind that normally you only get with your body. But next thing I knew I was like waking up in less than a minute. And I was like, "Wow, this is like I'm getting extra time in my day because I wasn't... I used to call it time lying in bed, I would call it meditating but it wasn't really meditating. It was like half meditating, not really getting the full value out of it. And then, when I wake up it's hard to get out of bed, especially in the winter because I keep my apartment cold, I don't always the heat but it's really invigorating and I have more time. Once I'm up and doing the Burpees, I'm ready. It's a beautiful day. After you finish Burpees, man, it's a great day.

Balint: Yeah, I know that physiology, so moving your body can affect your thinking. So it is helpful to move and I do move, just not that much, not so intensely as you, and I also know that doing sports before breakfast is very helpful. I heard that you can avoid putting on weight as well going jogging, for example. So the last question is that you work, I assume, in your teaching and also during your consulting with international people and New York is a very, very international and you, I know that you traveled. You had some overseas travel at some point of your life, extended one. And



what kind of critical cultural differences have you encountered, have you seen, in which you overcame, like something that was memorable?

Joshua: Well, the big one is what we've been talking about is the cultural difference between learning intellectually but ignoring social and emotional versus learning the social and emotional skills that I think in the future are going to be much more important. So that's not a culture, that's not a geographically based culture, although there are certainly cultures that are more rote learning than the United States. If I picked something that had to be from another culture, it's so dominant that shift is such a bigger shift for me than anything else. I mean, really when I travel, I travel to find similarities, not differences. And I like to see how people are the same in different places.

So, because I feel that that helps me learn more about myself. If I see someone in a different culture, I know that they're still human just like me. And so if they're in a different culture, then I can look at the differences in behaviour that tells me something about myself because I know that I would probably behave differently there too. So I don't know if this makes sense. Does it make sense what I'm saying? That if you and I are both the same but you behave differently and I can see the differences between the culture, then that tells me where the difference between our behaviour is coming from. Which means I can see that your behaviour in things that I normally take for granted become obvious to me about myself. I guess a big example. When I went to North Korea I noticed that there were all these... Every building has pictures of Kim Il Sung and Kim Jong Il and now Kim Jong-un. And I ask myself what's it like to live in a place where these dictators, I don't know if they think of them as dictators, but if everywhere you go, you see these faces everywhere all the time, "Oh, my God. We're saturated with that." And then, I thought they probably don't think about it, they probably... it probably just blends into the background for them.

So I thought, "That's interesting. If they're not noticing stuff, then they're blind to it. That means I'm probably not noticing stuff that I'm probably blind to." So I thought, "What do we have that's all over the place that I'm not noticing?" And I'm sure there's many things but one thing I noticed was advertising because North Korea has basically zero advertising. And then suddenly I thought, "Oh my God, I don't know where you are or whoever is listening to this, but I'm in my apartment right now and if I look around and just count the number of logos that I can see, there's a lot of logos around. So I don't have pictures of Kim Il Sung and Kim Jong Il, but man, there's like a lot of logos. There's a lot of advertising, and living in New York City if I go to Times Square, oh my God.

Suddenly, I saw the Times Square kind of like their big statues of their big leaders. Obviously, they are very different. There's some similarities. So what I'm saying here is that taught me something about myself. It was something that I was blind to and I had to realize how much is all that advertising affecting me. How is that affecting my



values? I can see how it probably affects their values. I was blind to how it affects mine and that makes them more interested. So I don't know if you've ever watched online or I've seen videos of, I think Sao Paulo, Brazil, they made it so there's no billboards in the city and it's very interesting to look at the city before and after and to imagine my city if it changed. How is business going to be different if you can't do mass advertising to everyone? So I'll stop there.

Balint: So such contrasts bring out values or things you haven't seen yet, for example...

Joshua: Yeah, hidden stuff.

Balint: Yeah, for example, the one thing that I heard about in an interview that I mentioned with you, with Mark Bidwell, is the raisin exercise, that you give a raisin to somebody, to the participants of your lecture or course, and then they have to consume it, three raisins, within like an hour. And they cannot do anything during that time, no interruption and then they realize how unique the taste of raisin is, which they took for granted until then.

So I want to close off this interview with this thought, and what would be the best way Josh, for listeners to reach you?

Joshua: There's a couple of ways. What I'll do is this experiential experience is really an integral part of my message. And so I'll set up a page that is spodekacademy.com/hardware, which will give people access to one of the exercises in the book, which I put online, which is the meaningful connection exercise, and have videos of me with Marshall Goldsmith doing it and an excerpt from the book. So spodekacademy.com is where my courses are available and if people want to take my entrepreneurship course or my leadership course, they can do it there. spodekacademy.com/hardware will give them access to that specific exercise. joshuaspedek.com is my personal blog which I've written to... I've just recently posted my 2500th post. So don't try to read it all but that's where you get my views of the world and things from my perspective.

And then, also there's a form there so if people want to email me directly, they can do it through joshuaspedek.com. My Twitter account is Spodek, S-P-O-D-E-K. And then, there's various other places. If they poke around those sites or if they search on my name, then they will find lots of other stuff too. But those are the big things, spodekacademy.com, also [/hardware](http://hardware), and then joshuaspedek.com, and Twitter Spodek.

Balint: I will put it into the show notes, of course as usual, so people, listeners when they check the episode, there will be a website there, to my website there will be an address to my website where they get all this information. So thanks a lot, Josh. It



was amazing to learn from you about experiential or project-based learning, and also about your career how you got this far. Thanks.

Joshua: Yeah, I've really enjoyed it. And I mean, I'm both... I really enjoyed and am satisfied, and also I feel like with all the things we overlap on, I feel like this is just the beginning. Listeners, don't know that we had this great conversation yesterday where we touched on all these other things. And I hope that we get to talk again.

Balint: Yeah, me too, of similar length yesterday, also one hour. Yeah, yeah. Looking forward to further exploring it with you.

Joshua: Well, thank you very much.