Kasie Whitener (00:02):

Welcome back to the Moore School Podcast, Moore Impact. I'm Kasie Whitener, your host and with me today, Associate Professor of Management Science, Dr. Joel Wooten. Welcome in, Joel.

Joel Wooten (00:11):

Thanks, Kasie.

Kasie Whitener (00:12):

I'm glad to have you here. I get to talk to you for the first time. I see you at a lot of the things that we do as a big department and, and college, and then we just kinda like wave and say hi and then haven't actually gotten to know you at all. So this is exciting for me to get to know you.

Joel Wooten (00:24):

Yeah, Same.

Kasie Whitener (00:25):

Well, so welcome into the program. I read a little bit of your bio. I know you did undergrad at Georgia Tech and then MBA and your PhD at the Wharton School in Pennsylvania. So tell me a little bit about how you got to Carolina and what brought you to Columbia.

Joel Wooten (00:39):

So yeah, I had this really interesting career path. It wasn't quite traditional for an academic, um, but when I was at Wharton I was doing research on innovation. Uh, I was looking at schools that sort of fit this interesting profile of can I do the research and teaching that I enjoy? Can I be close to family, can I not be in a cold climate? All of those things were led me to South Carolina and it's just been a really great spot to land so far.

Kasie Whitener (01:06):

I like to say don't wanna be in a cold climate yeah. That's right. Yeah. You spend a few years in Pennsylvania, you're like, what's warmer than Pennsylvania?

Joel Wooten (01:12):

Yeah, pretty much anything. Yeah, there

Kasie Whitener (01:14):

You go. So what is your area of research and management science?

Joel Wooten (01:17):

So, uh, within management science, management science deals with a lot of operations and logistics, uh, types of issues. I'm a little bit different in, in that I deal more with innovation topics, specifically with like innovation contests. How do people come up with ideas? Uh, what makes a good idea? How can you sort of extract some of these things that we used to think were, um, more or less lucky? And now we're trying to figure out how can we engineer, how can companies engineer better, uh, solutions to things?

Kasie Whitener (01:47):

How can companies engineer better brainstorming, better ideating, thinking about more interesting solutions and top this is the work that

Joel Wooten (01:56):

You do. Exactly. That's

Kasie Whitener (01:57):

Really exciting. Yeah. What are some of the companies that you're working with and what kinds of are you are, let me like, I I feel like now I kind of need to rewind back to this management science approach. What is the approach here? I mean, is it about decision making? Is it about analytics? Is it about data gathering? Like where do you, where's the sort of basis for this?

Joel Wooten (02:15):

Yeah, good, good question. So within management science, all of that is dealt with. And so I have some classes that are specifically devoted to, uh, analyzing data, data analytics. That's a revolution that sort of come through that touches every type of business now. Uh, but for the innovation piece, it's really, um, on the, not looking at it from a creativity standpoint, but from a, are there practical tools that we can, can, can we pull this lever and no matter how creative a person is, they're gonna have a better idea as a result. So that's kind of where this innovation tournament, uh, comes from, uh, delving into, you know, is it better to have more ideas or is it better to have crazier ideas? Like, that's a, a really interesting question that up until a few years ago, no one had really looked at,

Kasie Whitener (03:03):

Are there psychology classes and psychiatry conversations around all around this as well. Like, how do people think? Where do their, how do their brains function?

Joel Wooten (03:12):

Uh, a little bit. That's not quite what I go into, but, but that's certainly on the table for, for interesting things as well.

Kasie Whitener (03:18):

Okay. So in management science, what are some of the classes you teach on the undergraduate level?

Joel Wooten (03:22):

Okay, so for undergrads, I currently I teach, um, an innovation and design class. So that's sort of the core follows the core research that I do teaching people about innovation tournaments. And we do very practical, can we create businesses with cool ideas. Uh, and then I also do, uh, uh, an advanced, uh, qualitative analysis class, um, uh, applied statistical modeling and it's been run as sports analytics for the last few years. Um, but that's within our data analytics concentration really popular. And, and we look not at innovation things there, but very much, Hey, how do we get better ideas from data? How do we, how do we analyze this stuff?

Kasie Whitener (04:04):

We had an event back in the spring called Moneyball where we were talking about sports analytics and we were bringing in different, um, analysts to talk about kind of, can you look at overall statistics in sports and, and see trends, um, and then predict behavior based on those trends. And my big question for one of our speakers was, can you predict cheating or can you recognize cheating based on the analytics that you're seeing or the, the statistics that you're seeing? And he came and he showed where, uh, they had made a rule change in major league baseball and how things had changed, the performance of the teams had changed based on the rule change. So clearly people were breaking the rule ahead of time, right? And so there was a a lot of conversation around like, all right, what is the data telling us and what do we do to take action on that? Is that kind of living in the same neighborhood as the work you're in?

Joel Wooten (04:49):

Absolutely. The one of the cool, uh, classes we do in that sports analytics class is showing how data can predict cheating in the, in a very similar way, but this was with referees. So they looked at some data and said, this is peculiar, this isn't how the outcomes should be playing out. And we're gonna match it up with what's happening in the betting markets and what's happening with certain referees in the NBA. And we're gonna show kind of without a doubt that this ref is betting on games and leading a betting syndicate, which was super cool, right? Like, hey, the data brought this to the surface and, and now we know it's true.

Kasie Whitener (05:25):

It becomes like data investigations, right? There's like a whole TV show, I'm sure somewhere in the works for like the scientists that are

Joel Wooten (05:33):

That's right.

Kasie Whitener (05:34):

That are trying to uncover cheating in different major league uh, sports. That's fantastic. There's, um, I read a paper years ago about, uh, specific, it was looking at the number of fouls called in the second half of a game that was televised versus a, the, the second half of a game that was not televised. And the theory was that like there's more fouls called in the second half of it's televised 'cause they're trying to keep the TV audience engaged. And I thought even just that, like, I don't wanna call it an assumption, but even just that sort of thought of like, maybe this is what's happening was really interesting to me.

Joel Wooten (06:05):

I love all of the things that get pulled out when you start looking at the data. My fa I think my favorite class, it's actually a string of classes we do in the sports classes about what drives home field advantage. And it turns out it's the referees and how much control they have over the game. And because they don't wanna disappoint the crowd, they skew things not consciously, but kind of subconsciously right? In favor of the home team. And if you take away through covid when fans disappeared, that went away. And so home field advantage kind of disappears if you do not have a home crowd. And it's a purely psycho psychology, a psychological mechanism where you don't want to disappoint the fans, right. And, and you can't do anything about it. It's sort of baked into our inherent brain function. And, and that echoes exactly what you were saying. I think it's just fascinating.

Kasie Whitener (06:57):

And always the assumptions we make are just like, it'll come out in the wash. Like eventually you're gonna go play in a, in another, on another team's field and you're not gonna have the advantage and then they're gonna come back to your field and then you will have an advantage. So like eventually we think like all things are gonna even out. But as a scientist, like is that true? Like, are all things going even out at some point? Or are we always going to see some level of skew?

Joel Wooten (07:18):

Yeah, and great question. And there's so many levels to this. It's not just home and away, it's also there's superstar effects. So there, there are these unconscious biases when you start to think about a, a star player versus a non star player and how they get foul calls in the NBA or how they get strikeout calls and, and essentially the refs don't want to determine the outcome of the game and they wanna make the fans happy. And you have all of these like mechanisms going on below the surface. So who knows if where it comes out in the wash, it's so complicated.

Kasie Whitener (07:49):

It feels like an economics conversation. Like where are the incentives, right, <laugh>. That's right. Who's being incentivized to you? That's right. All right. If an undergraduate is coming to the Darla Morris School and they're considering management science, what are some of the positive features and benefits of management science as a major? Why should somebody go, this is where I belong, this is what I want do.

Joel Wooten (08:07):

I think there are two things right now. One is the world has sort of in the last five years really taken, uh, operations and how things run and how companies are doing things and seeing how important it is with the logistics supply chain issues sort of coming through COID that opened up lots of these questions. And, and this is where a lot of the AI work and the data analytics work is being done in this operations. Sort of hands-on nitty gritty, how do businesses get things done? Uh, the second thing that I think is more, um, uh, specific to South Carolina and the Darla Moore School is, uh, the, the management science department has for years really had this hands-on approach. Um, the, there's a center that does projects with companies, so students get firsthand sort of consulting, uh, experience and that leads to jobs. Uh, a lot of the classes we teach, like the sports analytics class and, and a, a music analytics class that I'm, that I'm piloting soon, um, really focus on, hey, can we make learning more fun? Can we bring not just lecture and not just, um, deliver information, but let you learn a skill, let you do something fun with this. Um, and I think those two things, uh, are really highlights of the program.

Kasie Whitener (09:24):

Well, now you're talking my language because I don't do anything if it's not gonna be fun. Yeah. <laugh> <laugh>. So then in the world of entrepreneurship over on our side in the management department, we spend a lot of time in experiential learning, and I know management science is doing the same as you talked about these consulting projects. What are some of those experiential opportunities you have in your classroom?

Joel Wooten (09:42):

Uh, so in my classroom, one of the things that we've done, and, and I'll go back to this, uh, sports for one example in innovation and design class for the other, uh, we, that whole class began because we were

working with Gamecock baseball. They brought in these, um, advanced systems, the TrackMan system with LIDAR and, and, uh, ball tracking technology. And they didn't quite know what to do with it. So we helped them out and, and helped them, uh, sort of beef up their analytical capabilities. And as, and the, the flip side of that is we got access to their players, to their data. And so in the class, we take real baseball data that the team has questions about and we go answer questions, we go figure out, hey, what, what's happening? What can they do better? What happens with certain pitch counts? And can we, um, predict, uh, the best outcome in this particular scenario?

Joel Wooten (10:32):

And students love that, right? You're working for the team, you're working with the team. Uh, that's one example. Uh, in the innovation and design class, it's all about, uh, can we bring new ideas to life? And how do we do that in a, in a very real way. Like I don't wanna stand up in the front and tell people, I'm gonna just let you do it, and then we're gonna talk about the tools that could do that could make this better. And each week we're sort of pushing the idea forward. And by the end of the class, we have a semi launchable business. We're sort of to that, that alpha launch stage for, for some of these

Kasie Whitener (11:08):

Are most, so most of our classes will have this theoretical underpinning, right? We'll have our textbook, we'll have the materials that the students are supposed to read, then there's gonna be some kind of activity where they're gonna be able to put those, that knowledge to work either in the classroom or on projects and that sort of thing. Is the structure of your class when you have these kinds of group projects or you're having, um, what kinds of work can the students be expecting to do?

Joel Wooten (11:33):

Um, the, the work is definitely different. It's everything from, hey, this week you have to make a webpage. This week you have to set up Google Analytics on that webpage. And, and next week we're gonna send a thousand visitors to the webpages and we're gonna see what they visit and we're gonna track it and we're gonna understand who your customers are. And very real tactical stuff that if, if you go and and get a job, that's, that's what you're gonna do. Now,

Kasie Whitener (12:00):

Um, like typing this out as quickly as I can, I'm taking notes, notes, <laugh>. So when I think about you, uh, you mentioned spending the time in a semester launching a business and getting that business ready to go. What are some of the, uh, the practices that you guys are working on? Where do you start with the, what solution are we looking for? What problem are we trying to solve? Where does that come from?

Joel Wooten (12:21):

Yeah, so the, and and this goes back to one of your questions you, you had at the beginning about what companies do I work with. And, and I'll bring in a little bit of practical here. When I go and do innovation type work with a company, they almost always think, "We know what the problem is, we know what the need is, and we're gonna spend a lot of time on the solution. How do we get the right solution?" And, and one of the things that, that you find from, from the academic material, and if you do this enough, is that finding the right problem and finding the need is everything. Um, and so, you know, if I work with a company by the end, they'll, they'll have totally changed their mindset to, well, 80% of what we do should be on this front end of figuring out what's the best problem to solve?

Joel Wooten (13:08):

What are the needs of our customers or clients? Because we think we understand that, but we actually don't. Um, and so for in, in the class, that's, that's where we start from. We start, uh, with this, um, broad net of, Hey, let's, let's look around for some interesting problems and then let's go spend a lot of time figuring out is it actually a problem? And, and then what are the needs around that? Let's not take our own biases into this. Let's go talk to people, observe if you can, instead of talk to, um, and, and sort of have a much richer understanding of is this an important problem to solve?

Kasie Whitener (13:45):

You and I are following very similar processes because in our new venture class, we do the same thing where we have this conversation around, usually we, we start with like the big global problems, right? And then we go, okay, if this is a huge global problem, what does it look like in South Carolina? What does it look like in Columbia? And then what does it look like on our campus? And how can we as citizens and community members here in Columbia and on our campus come up with a solution? And then the next question is, can you monetize that solution? Like, can you make a business out of it and build a business around it? So it seems like we're taking that similar kind of, uh, trajectory through it only on my side, we're like looking at where does the re where the, is the revenue gonna come from? What are the cost structures associated with that? And then, you know, how do you get investment to be able to build this for you? But it seems like you guys are working on maybe companies that are already in existence. So as you're, are you having that conversation around, do we build a business around this or do we sell the solution into an existing business?

Joel Wooten (14:39):

We do, uh, first day of class, actually in the innovation and design class, we talk about the difference between innovations, inventions, successful innovations, which the successful part brings in, in something where, uh, someone is willing to pay more than it costs to deliver the solution. Um, and so we definitely put that on the table, but we start kind of agnostically, let's not think about revenue for a minute. Let's fully understand the problem. Because one of the, the, the tricky things is that sometimes people will think it's a problem with a lot of revenue and it's not, or, um, they'll think it's worthless, but it actually can be monetized in a really compelling way, but you just don't have the insight at the beginning. And so I sort of take revenue off the table at the beginning and we work for several weeks before we bring that back into the conversation. So it's a delayed process for us.

Kasie Whitener (15:33):

So lots of reading,

Joel Wooten (15:35):

No, very little reading

Kasie Whitener (15:38):

<laugh>, lots of practical work,

Joel Wooten (15:40):

All practical work for that class.

Kasie Whitener (15:41):

What about exams?

Joel Wooten (15:43):

Uh, no exams,

Kasie Whitener (15:45):

Project based grading?

Joel Wooten (15:46):

Total project based things are, uh, I would say in that innovation and design class, there are three or four assignments due every week. And they're small. Some of them take 30 seconds, some of them take five minutes, some of them take three hours. Um, but it's all designed to, hey, we have an end goal and we have to take lots of baby steps to get there. The baby steps are gonna be graded.

Kasie Whitener (16:06):

You're working with graduate students in management science as well? Yes. What are some of the projects that graduate students are working on?

Joel Wooten (16:13):

So I do this innovation and design class with our PMBAs, so our Professional MBA program. Uh, it is always fun. They have, um, very unique outlooks on the business world. And, and I'm actually working with a former student right now, bringing her project to life. So I'll give you an example. Um, and, and this came up in the class and was worked on, it was an idea for a, uh, garment bag specifically targeted towards women and dresses. And the, this 1940s or fifties sort of garment bag was designed for men's suits. It doesn't work for different clothing types, it's boring. Um, and initially when I heard it, I thought, this is, this is a fine idea. This will act absolutely make money. Um, and then we, we, I started seeing it develop in the class and she started talking to me about how she wanted to totally redesign the engineering and, and solve the problem. And there was this need that wasn't being met. And that's when I was like, okay, you've got my attention. Uh, I wanna see where this goes. This is very interesting. And so that's, that's been really cool to watch develop over the past year.

Kasie Whitener (17:18):

She competed in Proving Ground, didn't she?

Joel Wooten (17:20):

She did, yes. And, and won was one of the winners <laugh>. So, uh,

Kasie Whitener (17:23):

I'm like, wait a second. That idea sounds familiar. Yeah, she was a proving ground. Yeah, that's really exciting. Yeah, it's gonna be fun to watch that business grow because she really is dedicated to this and this concept, like you said, it's absolutely monetizable. I mean, there's just not any way that this doesn't make money if she finds the right channels to be able to put it through. So really excited about that project. So that's exciting stuff. All right. What are some of the other extra outside of the classroom things that are available for management science majors?

Joel Wooten (17:50):

Uh, so the, the, our center is one of the biggest, it is a classroom thing, but it's also, uh, not, uh, the data analytics. Uh, we have this sort of hub that brings in companies with interesting data problems, uh, similar to how the, um, Moneyball day went. They, they, they hosted those types of events. Um, and then, uh, pretty much college campuses are just so busy and diverse and, and, and things are happening all the time. So all of those types of things happen within the management science department too. So clubs, activities, organizations, students are discovering, uh, lots of outlets for their creativity.

Kasie Whitener (18:34):

Anything you've got under, you mentioned the music analytics class that you're putting in place for the fall. Is that for the fall?

Joel Wooten (18:39):

It's gonna be for the spring. All right.

Kasie Whitener (18:41):

So, um, you gotta save me a spot in this class 'cause I'm obsessed with music and the analytics side of it is really interesting to me. Tell us a little bit more about what that class is gonna be like.

Joel Wooten (18:49):

Sure. Well, and, and I know you're a Taylor Swift fan. Huge. So this started with me, uh, about a year ago thinking, you know, she has conquered the business world and made such smart business decisions, and the music industry is one that just like sports came along and had Moneyball and, and we're up to sort of Moneyball 3.0 now. So there've been sort of three iterations of that in the sports world. The music world is a little bit behind that. Um, and so I started thinking about this and, and what this class is gonna be. Uh, I've talked to a couple of, uh, different musicians and I think we're, we're signed on with a couple, with, with several who are interested. Kevin Griffin from Better Than Ezra, uh, is, I've talked to him several times and, and he may be part of the class. Uh, there's a small, uh, up and coming group Windlow out of la um, uh, they're fantastic.

Joel Wooten (19:44):

They're gonna give us all of their data. And so we're gonna take the same approach we took with the sports class where we have baseball data, except we're gonna have a small upcoming band who's been very successful in Instagram. And we're gonna answer questions like, uh, hey, can we predict how many shares this song will have? Versus an original song versus a cover song. Uh, hey, you bought this piece of equipment. What's the ROI on that? Does that help you? Does it not? How much time should you be spending booking gigs versus doing, we're gonna take all of their data and sort of explore it from an operations perspective, which is one, not how musicians usually approach things. Um, but I think it'll be a great collaboration.

Kasie Whitener (20:24):

I'm really excited about this class and I'm not kidding when I say, you gotta save me a seat in this class. <laugh>. Yeah, okay. We can do that. The possibility of even just getting to listen to the conversations that'll happen related to this. I think when we consider things like management science as a discipline and individuals that consider going to major in management science, they really wanna know what's the

real work I'm gonna be doing? What does a job scape look like for these, these students when they come out? You made mention of using Google Analytics and helping to drive, you know, data-driven decision making. Uh, what are some of the things that students that come through management science can expect to do on the outside when they, when they leave our school?

Joel Wooten (20:59):

It's really broad. I mean, you have some students that come through and then take, go to consulting firms. So whether it's a strategy consulting firm like Bain or BCG or, or an operations consulting firm where they're gonna do logistics implementation, that's, um, one path. Uh, there are also students that come through and, and take on very operations heavy roles. So you can go to C-P-G company, um, you could go to, you know, Kellogg's or Kraft foods and be in charge of a product line and say, Hey, we have to get breakfast foods from the design process and, and thinking of new ideas and and R&D all the way to on the shelf store. How do we do that? And, and so anything and everything in between, uh, typically a lot of our students go to, um, big companies, Continental Tire, Coca-Cola consulting firms, but also a lot go to small firms where they need someone who can help them figure out, how do I do this more efficiently?

Kasie Whitener (22:01):

This has been a lot of fun.

Joel Wooten (22:02):

Yeah, this has been great.

Kasie Whitener (22:03):

I can't believe our time is already over.

Joel Wooten (22:05):

It did fly it

Kasie Whitener (22:07):

<laugh>. It goes by <laugh>. We didn't get to talk about your research, so I wanna invite you to come back and we'll talk specifically about your research and some of the publishing that you've done for the, uh, for the department and for yourself for in, in academic journals. I wanna learn more a little bit about that. Um, but for now, this is the end of it. Thank you, Joel Wooten for being here.

Joel Wooten (22:23):

Thanks, Kasie.

Kasie Whitener (22:24):

This has been more impact. When you learn more, you know more, and when you know more, you do more. Thanks for listening.