Project: Documenting COVID-19: Stony Brook University Experiences
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Interviewer: Chris Kretz (CK)
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Summary: Dave Ecker is the Director of iCreate at Stony Brook University. In this interview, he discusses the activities of iCreate during the pandemic, particularly their effort to design and mass-produce face shields for the Stony Brook University Hospital. He describes his collaboration with local public libraries as well as the impact of the pandemic on the operations of iCreate, on the students he works with, and on his home life.

00:03:00

CK: Okay, we are recording. Today is Friday, October 23, 2020. This is Chris Kretz for the University Libraries, talking with Dave Ecker for the Documenting COVID-19: Stony Brook University Experiences project. Dave, first of all, thank you for sharing your story with us.

00:00:26

DE: You're welcome. I'm excited to be here.

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CK: And just to get started, can you tell us how long you've been at Stony Brook and your current position?

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DE: Sure. I've been at Stony Brook twenty-four years. I came in 1996 and my current position is, I'm the director of iCREATE at Stony Brook University.

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CK: And give us a background on what the iCREATE department does.

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DE: So iCREATE started about six years ago in the collaboration between business and engineering in the thought process of: how do we bring innovation and entrepreneurship to Stony Brook University.

And what could we do to fill those gaps that don't exist now—or didn't exist then—in developing a department that really helped hands-on learning and gave access to the latest and greatest technology, as well as helping that entrepreneurial and innovative idea-making creation that exists in all students, faculty, and staff. And giving them access to this.

This was the rise of—where the maker space movement started. As you start to think about where that was going some years ago, this is where we've come up to our version of a maker space/an innovation entrepreneur space.

But it's many facilities, and it's also a whole program that students can really get involved with and embrace throughout their college career so that they can get involved from the freshman level all the way up to the senior level.

As they're doing different projects, they can start to develop that hands-on learning piece. That's something that's missing right now, as I think, in the COVID realm, with all of us doing stuff online. We provide that alternative to help students learn and think differently and out of the box. That they sometimes don't get through other means.

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CK: And just in terms of your area, so you're within the IT department?

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DE: I'm within the Division of Information Technology, is where I report.

But we have strong partnerships with the College of Engineering and Applied Sciences and the College of Business. We also have a relationship with our Economic Development department, because you can't do innovation in a vacuum.

And we've all learned that over time. You have to work together with a cross-discipline group of people to really develop skills and resources and expertise so that the students and faculty have the best experience possible.

00:03:25

CK: So if you take us back to early in the spring semester, say February—just as an example, what projects were going on in the iCREATE space?

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DE: If we go back to February, what was going on was—we were getting ready for a major, twenty-four hour makeathon event called Innovate It.

[It's] where students basically take over all our spaces and build something in a competitive way to solve a specific problem. Last year we tried to solve hunger or climate change or something else—and what devices could you make or design to go and try to solve those issues.

At the same point, senior design projects were going on. Students were making everything from 3D-printed clamps to designs to whatever else that was going on.

It was an active space where you see everything from games being designed—there was somebody who was working on a solar balloon—[to] all kinds of stuff that are developed to try to support their projects and ideas and also senior design projects that were coming up.

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CK: And what was going to be the topic of that makeathon that you were planning?

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DE: Innovate It, at that point, I think was going to be climate change and how to fight climate change. I think that was the topic. I should have looked before we had the talk today.

00:04:54

CK: That's okay. So when do you remember, yourself, first hearing about COVID or being aware of it?

00:05:04

DE: It was after February. I had traveled in February and I didn't even think about it. But it was the beginning of March when I started to hear about COVID. I heard about what was going on in China, but I really didn't focus on it coming to the US.

But in March it was really apparent for what was going on—especially when the campus was going through this craziness. Because you would start hearing of universities closing. And I have a friend at NYU, and she was telling me about what was going on there, and Stony Brook hadn't made a decision yet.

And all of a sudden we hear, Okay, Stony Brook is now closing for spring break. Okay, students have left. Oh wait—now we're extending spring break for an extra two weeks.

All right.

The next day we hear, Oh, wait, it's going to change again. Students now have to come back during spring break to get their stuff. We're going online, but we're not sure if we're going online forever. We're going online for a week or two.

It was a crazy time, and so much was happening at the same point. Every day I would be wondering, Am I going to work? Am I not going to work? What's going to happen?

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CK: So in that run-up to spring break—I know you work with a lot of students. How did you leave it with students when they left for spring break? What did you have to arrange with them in terms of the space and their work?

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DE: So what I worked out with them was that they could leave stuff in the space if they needed to. Or if they needed to design stuff, they could leave designs around and we would support them and everything else.

But then what ended up happening was, they ended up having to come pick up their stuff and just get it. Some students couldn't get back. So I know a couple [of] students basically took stuff and held it in this space until the student could get here on campus. It was really kind of crazy.

00:07:02

CK: And in your context, the stuff would be the projects they were working on?

00:07:07

DE: The projects they were working on. I had somebody leave a microwave in the space because they couldn't fit a microwave in their car.

So it ranges, what we had to store. Because it just had so much uncertainty and there were some students who just basically went away for spring break because they were traveling and they had no way of getting back in a reasonable time period.

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CK: So in terms of the operations of iCREATE, once it became apparent that the rest of the semester would be online—how did you feel about that? And then what kind of adjustments did you have to make in terms of what you could do?

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DE: So I was kind of in shock at that point. What we ended up doing was two things in iCREATE. As this was going on in spring break, we started and got asked to develop and see if we can make a face shield.

And what was going on was, upstate New York, one of our colleagues shared with my CIO and I—somebody had designed a face shield and was wondering if we could do the same using our 3D printers.

At the same point we were doing that, iCREATE was going through its transition of how we switch to online learning and what to do there.

I'm going to leave that for a few minutes, and I'll come back to that part of the department.

What we focused on was these face shields. So what we determined was, Could we do it?

This was a Thursday afternoon at about four o'clock in the afternoon. I had gotten a call from the CIO saying, “Did you see this email?”

And I said, Yes.

He's like, “Do you think you can do it?”

I said, I don't know. Let me try and I'll get back to you.

I put the designs on the 3D printers about six thirty or seven o’clock at night. I came back to Stony Brook, and I got the designs off the printers.

And I started going to local stores to see if I can put something together using this 3D-printed design. By about eight thirty, nine o’clock at night, I had a prototype ready to go and designed. And I sent it to the CIO.

When that happened, I was like, This is great. I think it works.

He was like, “Thank you. This is fantastic.”

The next morning—there had been 8 a.m. meetings or seven thirty meetings with the senior administrators on campus. And the senior administrators, basically, would talk about what's going on.

He [the CIO] shared at that meeting—I think it was either seven or seven thirty or eight o'clock— the design that I had to come up with. And I got an email during the meeting saying, Dave, we need five thousand of these tomorrow.

Basically, Do what you’ve got to do to make five thousand. And we need to work seven days a week/twenty-four seven to do it. The hospital’s in desperate need.

I got the email and I didn't think anything of it, saying, Okay, I’ve got to start figuring this out and putting them together.

So I was modifying my design, and I went over to Staples because I was trying to figure out what was going on with my design. At the same point this is happening, throughout New York, you start hearing about stores getting ready to close.

All non-essential businesses are going to close. They're not going to be open. Everybody's working from home. So now you have, at the same point we're talking about this, stores locally starting to do this, and people freaking out as you start to figure this out.

While I was at Staples, my cell phone starts ringing. I pick it up and it's Lauren Sheprow. She's the head of marketing communications at Stony Brook and she's like, "Wow. So, you're the most popular guy we know today."

And I'm like, Hi, Lauren. How are you?

And she goes on to tell me that basically, my design had been passed around all about in the administration building, and they wanted to write a story about us.

But she goes, "Have the medical doctors looked at it and cleared you?"

And I looked at her and said, No, I have no idea. I just did it based on our design.

She's like, "No, the doctors want to see it."

I said, How do I get a hold of a doctor?

She's like, "Just call so-and-so."

I called so-and-so—they had no idea what I was doing but she's like, "You have got to get in here right away because they need to see your designs by 11 o'clock a.m.'

And now it's 10:15. I'm in the middle of Staples. Honestly, I wasn't planning to go in right now. I was in a t-shirt and a pair of jeans.

I was like, You've got to be kidding me.

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CK: And is it still—are we talking about March period or—

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DE: This is still in March. This is March twentieth or something in this range: nineteenth, twentieth. This is really mid-March. This is right when everything started to close. I rushed in like you wouldn't believe. And I wasn't dressed for it, just to say.

Finally, I got a hold of somebody in infectious diseases at Stony Brook Hospital. [I] ran over and dropped off the design that I had in my hand to somebody at the front door of the hospital, that I didn't even know.

And they said, Here's the design. We'll call you.

I'm like, Okay. About two hours later, I get a phone call saying, These designs are good. But they're missing some piece here, some piece there. What can you do?

I said, Well, can I get the designs back? I don't have another design ready to make a prototype.

They're like, Sure.

[I] pick up the designs and then I go and I look at it and they wanted some sort of foam insert or something else—which was beyond my scope of my abilities. And I knew this.

So [to] my colleague John [Berwick] who was with me, I said, You know what? We can do some of this with foam and stuff at Home Depot.

I ran to Home Depot, bought the supplies, designed it, dropped it off to the medical doctors by about four o'clock that day. We got medical approval. They were like, Yes. Let's go forward. Start making them.

And from that day through our time in [the] end of April, we were making face shields. We basically put procedures together, put designs together. We were getting donations from everybody in the local community. And we started to make.

We realized with our capacity—by the end of that weekend, we were only able to make about forty face shields a day based on our capacity with 3D printing and everything else we had to do. So we needed to see about other designs.

Luckily, I had been talking to a local library, Sachem library—a guy named Chris [DeCristofaro] over there who I know very well, and he said, “Look, we can't get into our buildings because everything is closed.”

So now you went from Friday to Saturday, where we now have got approval—I went all Saturday basically buying every supply from Michaels, Staples, and Home Depot before they closed—to now, the next Wednesday, where I'm only printing forty a day. There's no way I'm going to get to five thousand anytime soon. They're offering to help at the Sachem Public Library, but they can't get to their machines.

Through that collaboration, we work with the BOCES [Boards of Cooperative Educational Services]—and BOCES is an organization that helps and supports libraries all around Suffolk County.[ed. clarification: the organization involved was the Suffolk County Library Association, SCLA]

They [SCLA] went and said, Well, we can make a 3D printer farm.

And talking to a guy named Roger [Reyes]—Roger went and basically picked up 3D printers from all kinds of different public libraries [and] put them together in a room. Him and a colleague got permission to leave their house and go to that facility because they became essential workers and started 3D printing these frames we needed so we can move from forty a day to almost two hundred or more per day.

And that allowed us to get more done in a quicker way, and we eventually met the hospital's demand of five thousand. Because by then, they were able to source from other local companies who were able to open and start producing them at a faster rate than we could.

But we were able to get through the rush that was really needed for our hospital to meet the demand of what was going on—from testing to supplies and making sure our doctors and medical professionals were taken care of and being safe through the whole COVID thing.

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CK: And just to give us a picture, can you describe what these face shields look like?

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DE: Sure. So the face shields are basically a plastic shield that goes over the face with a rim that goes around somebody's head. It has elastic around the back and foam to protect particles from coming in over the top.

Now, you could imagine—when I think of elastic, I can tell you about elastic supplies that had run out. Because at the same point we were doing this, they started to put a mandate on masks—just masks on a face without a face shield.

And everybody in the world started making cloth masks, and all the elastic in the nation ran out. So I became a supply expert of where to get elastic for these face shields to meet our demand.

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CK: I just want to follow up on a few things. So Sachem, that was—is that Chris DeCristofaro?

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DE: It is Chris DeCristofaro.

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CK: And so they had a 3D printing capability already.

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DE: Yes. He already had 3D printers there, and he was offering the help, but he couldn't get into his building.

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CK: So were you traveling to the printer farm that they set up? You were able to move back and forth?

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DE: I actually didn't because of COVID restrictions. The university did not want me traveling to their farm. They preferred me just going to Stony Brook University and my house.

So I restricted my movement a whole bunch. And as an essential worker, you want to make sure that I was safe and also any of my staff who was doing it. I ended up recruiting about three students and two volunteers.

Plus my colleague John Berwick and I—we were there, in and out of Stony Brook, seven days a week, on and off, twelve- or fourteen-hour days. We would take turns—who was there, who was not. But we were working very hard to keep everybody safe.

So we had all kinds of safety precautions we had to put in place, from everybody had to wear gloves, to everybody wearing a shield, to everybody wearing other things to make sure. And so anybody who was working on the project or working with the masks, we were very careful on where they were going and what their movement was.

Because you didn't want somebody to have COVID and [have] it get on the masks. That would cause the medical professionals to actually get sick.

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CK: And just to understand the process a little—so they would print the pieces up at the farm and then you were assembling them at Stony Brook?

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DE: They would print them at the farm. We were printing them here and basically, we would get the assembled rims, the pre-printed rims, and then we would do all the assembly. We would assemble the shields, the foam, the mask, the glue, the elastic, and everything else that needed to go in to make it all work together.

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CK: And do you know if they were one-time use, or were they reusable once they were in the hospital?

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DE: They could be reused. You could wipe off the shield. I don't know if they reused them or they basically threw them out. They were one-time use.

I think when the shortage was going on, we were reusing everything because we had been getting a lot of requests from all over the country on how to do this. And we were featured in a news story on NBC News. And then from those news stories, other people reached out. So I made a website and a blog article where I posted everything we were doing and the instructions.
And then even when we ran out of elastic, we came up with a rubber band strap and a duct tape strap. We posted those and shared those with different organizations throughout the country.

I know Boise State [University] was using our same design for what they were doing there. And I was also talking to a woman out of France who was using our same design to try to develop some things that they needed.

The shortage of PPE was drastic at that time because China had shut down and nobody was getting it. So everybody was coming up with innovative solutions to do.

We were working crazily to collaborate as much as we can to make sure that as much of the nation knew what we were doing, so they could replicate it anywhere they needed because hospitals were in desperate need: vets homes, the Southampton hospital.

And I think people were reusing it in all kinds of different ways. Because if you don't have anything, reusing something that you can clean is better than nothing.

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CK: Can you say a little more about what it felt like during that time, just how you personally were going through it?

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DE: [sigh] I was excited and exhausted at the same point, all the time. I seemed to be working twelve- to fourteen-hour days. Luckily, I had a very supportive family. I was scared every day when I got up because I didn't know if I was going to get COVID, and I didn’t know how to protect myself.

But I was so relieved to be giving back and helping with this effort. It felt so good that I was kind of okay taking a risk. But I'm thinking about it now and how sad it was because it was just very hard emotionally—and to just go through that because you’re worried about what was going on but also just how I felt.

And I felt like I was angry this was happening. And also, good [that] I can make a difference. But it was emotionally draining and mentally draining to try to implement something but also be worried and scared at the same point that somebody could get sick, and this whole project could die.

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CK: And so, you were still coming in. I would assume the rest of your family was isolating at home. How did that routine work out?

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DE: It worked out all right. I would go in a couple days a week. Luckily, we were able to rotate who was in each day to do stuff. Basically, they [my family] would isolate at home. And when I got home, I would take all my clothes off and jump right in the shower. My clothes would basically stay in the garage for three days until we washed them.

And luckily, my wife was trying to get deliveries. It was very hard to get food.

So I remember, as I was trying to sleep, she'd wake me up at one thirty in the morning saying, “I just got a slot for food delivery for a week and a half from now. What do you want? I have to put in the request now. What are we missing?”

And I was running around at that point in the middle of the night trying to figure out what food did we think we needed to try to basically keep us having food at home. Because you weren't getting anything. And that really was anxiety that really happened.

And I remember my wife getting this one delivery, and she texting all friends at one thirty in the morning. And they were like, You got a delivery? Can you put this on, this on, this on?

And then she would have eight cars at our house, [and she was] dropping food in people's trunks just to make sure they had food.

00:24:23

CK: So in terms of the home life, are there any routines you came up with—or what helped you as a family cope, or where did you find relief in anything?

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DE: We coped by watching Netflix, and that was really helpful. Also, the routine was Cuomo's briefings. Andrew Cuomo had a briefing every day around noon. And my son became a religious watcher of the briefings. So that ended up coping because if we didn't see it, we saw it on YouTube later, and we would have discussions just about the briefings each day.

And that communication that we got was so comforting because we knew other people were able to go through what we were going through.

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CK: And I just wanted to go back— you mentioned your CIO at the beginning. So who was the CIO at that time at Stony Brook?

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DE: His name is Charlie McMahon.

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CK: It was an initial email that started you off on this odyssey. Was that a general call for help, or was that specifically to you guys at Stony Brook for—

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DE: It wasn't even a call for help. It was basically some email that somebody shared that—they mentioned some conversation [that] was, they were going to experiment with making a 3D-printed rim for a face shield. And it wasn't even any details or anything else. It was just very vague.

And I had to do research and figure out what they were really talking about at that point. This was before even this conversation came into the mainstream and all the other maker spaces and innovation spaces around the country started to do this.

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CK: And now we're still in the midst of this in a very real sense. We're talking in October 2020. What's the state of the iCREATE operations now?

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DE: The state of iCREATE is in a different state. We now have budget issues at Stony Brook because of all of our expenses with COVID. And so we're only able to help classes, and I went from a staff of forty-six students, plus me, running five facilities and events and everything else.

We're at a state where all our facilities are closed, and it's only me and two students trying to help classes that need hands-on learning.

Because we only have classes at Stony Brook in person that are forty-six students and lower. Everything else is online. But a number of the online classes—the faculty still need students to do hands-on projects. And we have about fourteen classes that will need our services, and we're busy working to try to deliver what they need between now and the end of the semester.

It's a dire state.

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CK: Have you changed or had any new thoughts about how a maker space can operate in these kinds of conditions, or do you see a way to add online components or hybrid/physical?

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DE: I do. I really do see a whole bunch of opportunities for online components and hybrid components in a maker space going forward.

We had implemented—during the face shields, I had a grad student working for me who graduated at that point. She worked with me while we were doing the face shields to design a virtual program where we were able to make a maker series through YouTube and have events where you could use certain supplies and, through the computer, design what you need from a hands-on learning perspective.

And that was really helpful, and it reached a number of people. And I think there's a lot of opportunities there, where you can do it where you send the students the kits of what they need, and they can actually work with the maker space in developing what they need for their classes through that space and doing things virtually that way.

Also, I've been thinking a lot about the hybrid option. Where you can actually have somebody who's teaching from the space and the students learning and then submitting questions and doing stuff.

I'm actually going into a call next week with Flushing Jamaica Hospital, and we're going to be talking about how do we develop a collaboration to do something, maybe hybrid, for some of their needs of what they're trying to deliver, and what we can offer.

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CK: That's great. So, as a general question: what do you want people to know about your experience, what you lived through, and this time in your life?

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DE: I think people should realize what happened and how you can make a difference in any way you can. I didn't know anything about COVID and what was going on, but I was able to use the technology and skills I had, and my team had, to really make a difference. And I think anybody can make a difference in any way you want to.

This COVID experience really is a pandemic and we have to look at it as—it doesn't happen all the time. It only happens once every hundred years.

And it's how you step up and how you contribute to really do it. And its emotionally draining, but it can be really an exciting experience, as anybody who wants to really develop it.

And I'm just excited to be—having left some little mark on making a difference in people's lives. That's what we're all here for. We're here to stay connected and help each other, and we have got to remember that. Especially with everything going on and all the turmoil in the nation.

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CK: Well, Dave, we definitely thank you for all the effort and contributions you made, and thank you for sharing them all with us for the Libraries' archival project.

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DE: Thank you.

[end of interview]