

Episode 28

01:00:00:15 - 01:00:29:19

Scott Riley

Welcome to Moving the Needle. Casual conversations about ways big and small to impact student learning. Brought to you by the Faculty Center for Teaching and Learning at the University of Maryland, Baltimore. I'm Scott Riley, too. Let's move the needle. Hello, everyone. Welcome back to Moving the Needle. A core pillar of teaching is innovation. As the world advances, so too do the tools educators have at their disposal.

01:00:29:21 - 01:00:58:21

Scott Riley

The use of these tools in new and interesting ways can lead to revolutions in teaching. Virtual reality is a technology that has recently gained a lot of attention as a new platform that can empower educators. If you do a search for VR in education, you'll come across magnificent concepts like VR classrooms and hands on training through simulation. Combine these concepts with increasing affordability and improved user friendly software and you have a potential recipe for something special.

01:00:58:24 - 01:01:20:20

Scott Riley

Many universities and companies have started to explore its potential, and we will too, with the help of an expert in the field. I'm ecstatic to introduce my guest today, Dr. Jack Pottle. Dr. Pottle is the founder and chief medical officer of Oxford Medical Simulation. In his early career, he studied psychology and worked in nursing before studying at Oxford to become a doctor.

01:01:20:23 - 01:01:47:20

Scott Riley

After practicing for several years, he got into education, initially founding an open access medical education company, as well as teaching doctors in physical simulation labs. Then in 2017, he left clinical practice to found Oxford Medical Simulation, which focuses on VR education and training in health care. His work in the space has led to many publications in multiple journals and an interview on the being virtual show.

01:01:47:23 - 01:01:50:09

Scott Riley

Dr. Pottle, welcome to Moving the Needle.

01:01:50:11 - 01:01:52:27

Jack Pottle

Absolute pleasure to be here, Scott. Look forward to talking.

01:01:52:29 - 01:02:11:15

Scott Riley

Me too. So I kind of want to kick things off by asking you to give us a detailed overview of your company, Oxford Medical Simulations. I know we talked about it in the introduction, but if you could talk about it with respect to what it does for VR education, we'd love to know more.

01:02:11:18 - 01:02:39:05

Jack Pottle

Absolutely happy to see what our core we are a health care training company, so we use VR, virtual reality. We use A.I.. We use performance analytics to be able to improve clinician performance and

ultimately improve patient care. And everything we do is driven by that vision of how we allow clinicians to take better care of their patients. What does that mean in practice?

01;02;39;08 - 01;03;02;08

Jack Pottle

In some ways you can think about it like a flight simulation for healthcare professionals, for nurses, for physicians, for Allied Healthcare. It is about providing them with environments where they can practice safely to be able to learn from their mistakes and improve care. And we offer these VR simulations. So these are virtual simulations through which we do this in headsets or on screen.

01;03;02;13 - 01;03;34;02

Jack Pottle

So a doctor or nurse anywhere in the world can put on a virtual reality headset and essentially play the role of a doctor or nurse. This is virtual reality video gaming, and the point being, they can then interact with any patient in any setting as they would do normally. By that I mean a full history from a patient, full AI driven conversation assessing that patient, doing investigations, the management working with that team all in this virtual scenario.

01;03;34;04 - 01;04;08;05

Jack Pottle

Meanwhile, the patient's physiology and wellness is changing. The clinician can interact exactly as they would do in real life in a way that feels real. And that's what and what's important about what we're doing. It is creating environments that just feel like people are doing what they would do in real life. But we can scale that training and alongside that, be able to look at everything that veterans are doing in that scenario and being able to immediately after this scenario provide incredibly detailed feedback on their performance.

01;04;08;08 - 01;04;27;16

Jack Pottle

Show them instantly how they can improve and allow them to go back in and repeat that scenario and provide all that information to the learner at the institution as well. And so that is the deep dive into what we do practically in terms of the products that we offer. We now work in the predominantly between the UK and the US.

01;04;27;17 - 01;04;48;27

Jack Pottle

As you can tell from my accent, I am originally from the UK, now based in Boston. There are 80 or so of us in the company and we were really across education and healthcare. By that I mean predominantly nursing schools, medical schools and health systems with a particular focus on nursing and health systems currently.

01;04;48;29 - 01;05;14;17

Scott Riley

Wow, that sounds amazing. And I like that it's international at this point. It's not just something in the UK, but it's made its way to the US. I'm curious, why did you start this company? Was there a need in the space? Because when I think about the kind of things you're talking about, I assumed because I'm not educated on the matter, that there were physical labs that nurses and doctors could go to to practice these things.

01;05;14;17 - 01;05;17;04

Scott Riley

So why bring VR into the mix?

01;05;17;07 - 01;05;40;08

Jack Pottle

Yes, a good question, and I think I'd answer that in two parts. And the first one comes from why we realized the broader need in this space. So I started before being founder and chief medical officer of medical simulation. I started in educational psychology, worked in junior nursing for a couple of years in the UK, and then was a practicing physician for seven years, predominantly in the NHS.

01;05;40;13 - 01;05;59;28

Jack Pottle

But I worked abroad in Belize and Thailand, in South Africa and saw in all of these different areas the gap between how we train people at National Medical School and practice this huge gap between how you allow people to perform, to be able to take care of patients is very different from how we teach people to pass exams.

01;06;00;03 - 01;06;27;06

Jack Pottle

And so throughout that time I originally built a free open access medical education platform called Oxford Medical Education. That was when I was at Oxford Medical School originally. And we get up to 2 million or so people a year worldwide really, to teach them what they need to know, when they need to know it. And that was the realization to me of the value of delivering training at scale of being able to see this huge global need and being able to get scalable training to them.

01;06;27;06 - 01;06;54;29

Jack Pottle

That was practical. And over that time, I was also involved in physical simulation, as you said, that got the idea of these labs exist, these waves of training with mannequins and with actors, these high tech, expensive physical labs. And I realized that you could take some of the best components to that and be able to scale it in a much faster, more efficient, more realistic way to be able to deliver that impact scale.

01;06;55;01 - 01;07;17;13

Jack Pottle

And the impact at scale is really the rationale behind something like our mass. It's being able to say physical simulation with mannequins and actors is wonderful. I'm a huge proponent of it, but it is not scalable, it's not flexible. Whereas with virtual reality, you can do it 24 hours a day, seven days a week, anywhere in the world you can put on a headset or be on screen.

01;07;17;16 - 01;07;45;06

Jack Pottle

It's also time saving. You don't need faculty to be able to run it necessary, and so all scenarios can run without faculty. That frees up faculty and educator time to be doing other things. It's a massive reduction in cost. It's about a 10% the cost of physical simulation training to run something like ops, medical simulation, and the quality and breadth of scenarios that you can offer in VR, things that we could never do in a certain physical simulation.

01;07;45;06 - 01;08;04;14

Jack Pottle

So there's a big breadth benefit to it as well. And ultimately the ability to train at scale is limited by physical simulation. No matter how good it is, you cannot build physical simulation centers all over the world where you need to and VR can get to anyone anywhere.

01;08;04;16 - 01;08;24;09

Scott Riley

Yeah, this sounds great for what I'm hearing. I can think of three. These all fall into like three big pillars in advantage. You're talking about the scalability really does seem like a powerful advantage. And then the thing that I'm hearing that I really like is accessibility. You're bringing these labs to facilities that otherwise might not be able to do it because of cost, faculty time.

01;08;24;09 - 01;08;48;08

Scott Riley

There's a number of things. And then the last one is versatility. I'm sure that there are simulations that are much easier to enact in a virtual scenario than they are in the physical world. So I'm really happy to hear that there are a lot of benefits to using virtual reality to teach medical professionals. So I want to play the bad guy a little bit here and say the can't all be good, right?

01;08;48;08 - 01;08;59;13

Scott Riley

What are some of the challenges, especially in the health education field, that revolve around using VR? I can think of a couple off the top of my head, but I want to hear from the expert.

01;08;59;16 - 01;09;20;20

Jack Pottle

First of all, like absolutely appreciate you playing the bad guy. Every every story needs a bad guy. And honestly, I am very open about the negative elements of what we do or potentially negative elements. It is my job to help our clients and partners find ways around these elements, so I am incredibly upfront with it. I would divide.

01;09;20;21 - 01;09;48;20

Jack Pottle

Might be very interested to hear your opinion on it as well, but I would divide it into I think one is that you need to be able to cover all of the different needs of people coming to you with scenarios. You need to be able to cover things like individual training, team training, communication skills training, physical skills training and to be able to do that is very difficult to build a platform to be able to cover all of those different elements.

01;09;48;22 - 01;10;18;27

Jack Pottle

The other challenge in this space is being able to say, how do you create a system which is adaptable to different environments? Every health care system is different. Everyone does things in slightly different ways. So a massive challenge in any kind of virtual simulation is building scenarios that can be flexed by the institution to meet specific needs. And some of those we've worked our way around in how we designed the platform to be able to train in the different ways of building, authoring platform to allow claims to be able to adapt scenarios.

01;10;19;00 - 01;10;55;19

Jack Pottle

But I think there are some inherent limitations and part of it is internal, part of it is external. The internal one, I would say is technology. VR is wonderful for scaling simulation. It is not the best way for training someone how to do suturing, for example, how to stitch someone on the haptics. And that's the touch and sense of touch and feel that you can get from virtual reality tools no matter what linked in may tell you is not good enough yet to replicate anything close to what we can do in real life.

01;10;55;22 - 01;11;15;15

Jack Pottle

And I think being aware of that and upfront to that and saying to people we can do a lot of things

better than physical simulation, there are a lot of things that we can't do as well, and there's a big overlap between them allows people to see where VR can fit in a whole simulation or whole educational curriculum to be able to find the best, the best fit for it.

01;11;15;17 - 01;11;44;06

Jack Pottle

It is a tool to use in a simulation toolset. So I think the the answer to limitations, I'd say one is the inherent element of the technology too, is how you build a platform to make it scalable and to make it flexible to different needs. I would say the final challenge is more an external one and it is more this is a new technology and a lot of people in healthcare education are deliberately risk averse in many cases.

01;11;44;09 - 01;12;02;11

Jack Pottle

So being able to take people on that journey, this isn't a scary technology is something that you can use and something that you can build upon is a lot of the emphasis behind our work. And that is a genuine challenge that every health system will have. You'll get people that understand it and want to drive it forward and people that don't.

01;12;02;15 - 01;12;06;09

Jack Pottle

Being able to navigate that is always an interesting experience.

01;12;06;11 - 01;12;28;21

Scott Riley

Yeah, I agree. I think the the external limitation is the one that I think about the most is convincing individuals or creating buy in that this new technology is useful because you can show a bunch of videos of simulations, but until you're able to convince people that it's worth implementing that, that's to me the real challenge, because like you said, it's a tool.

01;12;28;23 - 01;12;52;26

Scott Riley

If you design the simulation correctly, then it's a useful tool. But convincing people that it's worth approaching and where it's trying, especially in a risk averse field like medicine, I agree. I think those are some challenges, but I am glad that you're in this space to kind of overcome those challenges. You pioneer the way so that VR can become more ubiquitous in these kind of environments, because I very much think it's a great tool to have.

01;12;53;01 - 01;13;11;10

Jack Pottle

And that is, I think, one of the big roles that we have as as a company leading the way in this. It is not just to produce technology that works, it is to be able to encourage people and support them in its use. If people have bought homes and are not using it, we as a company have failed.

01;13;11;13 - 01;13;29;21

Jack Pottle

It is our role to make sure people can use it effectively to improve care. And I think that concept of how to use a tool like this to democratize the way we love our education is our role as a company. We need to support people on that, on that journey, and we do that as much as we as much as we possibly can.

01;13;29;23 - 01;13;50;10

Scott Riley

Kind of picking something out of that. You you talk about helping the individuals become, what I'll say, proficient with the technology, because first you have to know how to use the technology before you can even get into the simulation. And you mentioned that your background was very much your original background was in physical simulations. How did you yourself become proficient in this technology?

01;13;50;10 - 01;13;55;21

Scott Riley

Was it a natural pathway or did you have to kind of take the road less traveled to become proficient in it?

01;13;55;23 - 01;14;21;07

Jack Pottle

I think the first thing to say is I would never argue I am proficient in the technology. I think the honest answer is what we've built and what is possible in VR and AI is so big that no one can be proficient in all of it. And I've acknowledged that very early on, and I think a lot of it focuses on what are our strengths as an individual and how are people stronger as teams.

01;14;21;07 - 01;14;45;13

Jack Pottle

So I founded UX Medical Simulation with my co-founder and CEO Michael Wallace, whose background was in technology complex health care application development. And so the combination of my clinical and educational expertise with his technical and business expertise is what got me off the ground. But nowadays, a lot of it is that we have a fantastic team doing this.

01;14;45;17 - 01;15;10;22

Jack Pottle

We have people better than I am at building all of these different elements. These are world leading VR developers, artists, animators who are incredibly proficient in the tech, and I learn from them, they learn from us. So we are growing together and it's one of the most exciting things about doing this work is, yes, seeing the impact it can create, but also being able to work with these individuals to build something which is totally new.

01;15;10;27 - 01;15;28;21

Jack Pottle

There is no blueprint for this. There's nothing to follow to say this is how you should design it. And that makes it a really exciting place to be, to be able to learn and grow and adapt together in collaboration with our clients. It's a fantastic job. So I can't say enough about how lucky I feel to be in a position where.

01;15;28;24 - 01;15;49;26

Scott Riley

Yeah, I imagine it's an exciting adventure every day when you're working with these kind of projects. And so I know you mentioned there's no blueprint, but it piqued my curiosity. When you talk about the development of these simulations, can you give us a basic overview or some best practices for how do you develop simulations like this?

01;15;49;28 - 01;16;12;17

Jack Pottle

So so yes, the best way of describing this is probably to relate it to how we think of physical simulation. And we always start with the learning objectives. What is it that you're trying to teach? Because really everything in terms of the design comes off those different elements. And by that I mean what is the interaction type that you need to have?

01;16;12;22 - 01;16;32;07

Jack Pottle

Do you want to have hand control in that? Do you want to have voice controlled? Should it be a multi patient or a multi player scenario to be able to meet those learning objectives? And from there you begin to think about the components that go into it. So the environments, the characters, the equipment that you might need to be able to hit those learning objectives.

01;16;32;09 - 01;16;55;29

Jack Pottle

And from there we layer on the patient characteristics, the non-player character characteristics that may come on, elements of the physiology, the emotion that goes into it, and then what the players are going to say to you and the flow of that scenario coming together. And what we then do in physics, in physical simulation is you might talk about the debrief, the process of how you're going to debrief someone once they've been through that scenario.

01;16;56;01 - 01;17;19;17

Jack Pottle

We think about, yes, the debrief, but we also think about how are we going to provide feedback, how are we going to be scoring the the individual on that, on that progress through that scenario? So there are huge numbers of things to think about as we are building these simulations. An awful lot for authors to keep in their heads and all of it needs to be related back to the evidence base.

01;17;19;20 - 01;17;41;22

Jack Pottle

So we build scenarios with a multi-stage peer review process. They are all related back to the evidence base. We made that very transparent, swallowed it as well, and we go through regular reviews. So I don't know if that answers the whole of your question in terms of what goes into it, but I think it is a the best way to think is start with a learning objectives.

01;17;41;22 - 01;17;51;15

Jack Pottle

Think of the components of the scenario that you're trying to build and the feedback and the scoring that comes from it and continually relate to back to out in space and best practice.

01;17;51;17 - 01;18;18;16

Scott Riley

Wonderful. So it does answer my question, but it also whets my appetite to know more. I feel like that in and of itself as a whole conversation. One thing that I do want to ask just to help set a sense of I don't want to say scale, but put a put a frame around it is how long do you think if someone were if someone from a university here was going to approach Oxford simulations and ask for one of these to be developed, what do you think the time in general it takes?

01;18;18;18 - 01;18;27;15

Scott Riley

What is the time in general it takes to develop one of these simulations? Is it a year long project? Yeah, I'm sure it varies, but what would you say the median is for the average?

01;18;27;17 - 01;18;51;04

Jack Pottle

Yes, so I think so. I frame that in two ways. One is the amount of time it takes to build a platform in which to build these scenarios. And that's what we spent the last five, six years doing, is building a platform whereby you can build new scenarios quickly to help to be able to meet these different needs, building up the machine learning models, the engines to be able to run the scenarios.

01;18;51;06 - 01;19;12;21

Jack Pottle

So that process is long. The process then of building scenarios on top of the platform to answer your question, as you hinted, is very much how long is a piece of string? What scenario is it that you want to build? If you're building something relatively close to what we've already built, we can do that in a matter of weeks with mass create our authoring platform.

01;19;12;23 - 01;19;48;19

Jack Pottle

People don't need to go through us to do that. They can literally build those scenarios themselves using our authoring platform so that massively reduces the time. To how much time do you want to invest in this? And you can be able to produce anything off the back of it. I would I would copy out what I said and again, stop being the bad guy before you have to saying that actually if you came to me and said, Jack, I want to build a scenario on the back of a helicopter with 40 people and a promo machine, I would say that is not a matter of a few weeks.

01;19;48;22 - 01;20;08;03

Jack Pottle

That is a multi, multi month project that will take a great deal of time and thought and backwards and forwards. So I think I would say anything from a few weeks to six months from a really complex project like that would probably be a reasonable estimate. But it very, very much depends on what the ask is understood.

01;20;08;03 - 01;20;34;05

Scott Riley

I mean I think that's great that there is a lot of there are a lot of options to go with. If you want to create something entirely unique, that's an opportunity that you can have at Oxford Medical Simulation. But also if it's something that maybe is more commonplace in medical labs that might already be developed and then you could have it, you know, you could ask for it in June and have it ready for the fall semester.

01;20;34;05 - 01;20;36;13

Scott Riley

If it's something that you've already kind of built.

01;20;36;16 - 01;20;56;02

Jack Pottle

100%. I think our role as a company and what we've increasingly done over the last two years is being able to make our tools available to people to build what they want. We don't want people to have to come through us to be able to build what they want. We want to make the tools so that they can just adapt scenarios on the fly.

01;20;56;04 - 01;21;12;15

Jack Pottle

And that's what we've got to now with our mass create is people don't need to have the blocker of asking us for things and building. They have all the tools available to them to say if they want to spin off a new scenario to something new and exciting that we haven't thought of as our mass, they can.

01;21;12;17 - 01;21;32;01

Scott Riley

Awesome. Awesome. With that in mind, we've we've discussed the the partners, the users, people who help validate the simulations. But there's one group of people we haven't talked about yet and

the people that I like to think are the most important in this whole process. The the students or the potential trainees that are going to be taking these simulations.

01;21;32;01 - 01;21;49;14

Scott Riley

So I'd like to switch gears a little bit and talk to you about some of the outcomes with the students. I'd like to start by asking what's the general perspective from? Have you heard the general perspective from a lot of students about their feelings on VR for training simulations?

01;21;49;16 - 01;22;13;14

Jack Pottle

Yes. So we have a we have a whole and successful support team to help people with this. So we listen very closely to learners going through it. I think increasingly for the younger learners in particular, there's an expectation of this now at nursing and medical school. They are very aware of VR. They know what is going, what they know what it's about, and a lot of them have done it before.

01;22;13;16 - 01;22;30;28

Jack Pottle

So some of them are not at all surprised by it. And VR for education seems a natural fit. I would say that is a majority, but not everyone. Some people are still surprised by VR, some people don't want to put on a headset and they need to be encouraged to do that to get a sense of how it feels.

01;22;31;01 - 01;22;51;03

Jack Pottle

So the technology wise is less of a barrier, but for a few people there's always that technological barrier to get into it. When people put on a headset, that feeling dramatically changes because they don't realize what it can do. And we always encourage people to dive into any headset and try any kind of VR before to go and ask if they can do.

01;22;51;06 - 01;23;14;08

Jack Pottle

Because playing beat Saber really gives you a sense of how much reality works. You don't need to do IMAX necessarily. I think it then comes down to once that part of the technological barriers, how people enjoy using the platform itself, whether they're using it for education, training or assessment. I am constantly enthused by learners response to our message.

01;23;14;10 - 01;23;36;24

Jack Pottle

They get it. They get it for their own benefit to be able to see their improvement over time. And what they particularly value is that ability to be able to have agency to practice in ways that they are never able to do at National Medical School, they can go and have that psychological safety to be able to mess around, make mistakes, and it's okay.

01;23;36;26 - 01;23;55;12

Jack Pottle

No one's watching them, no one dies, no one's going to shout to them It is okay to fail on that way of thinking. I refer to it as aerosol learning is what we're trying to build of trying to be able to say Medical, medical mistakes are a part of life. We want you to make them in a safe space and therefore learn from them.

01;23;55;14 - 01;24;17;06

Jack Pottle

And that particularly resonates with the learners as well as don't get me wrong, as well as the wow

factor. People love putting on VR and we try to remove that as much as possible, but it is a nice side effect of what we do. But I'm more interested in the educational outcomes that comes from it. The satisfaction scores from us as well as the usability scores are very high.

01;24;17;08 - 01;24;31;28

Jack Pottle

And that's not just coming from internally. We have lots of people that do studies on our tests now, so we have plenty of research from lots of people at Johns Hopkins have done a number of papers on Olmsted nursing that show some of these outcomes in the learners responses to our mass, which is always confusing to see.

01;24;32;01 - 01;24;56;02

Scott Riley

Yeah, and I want to highlight again some of the powerful concepts that you've discussed, the the idea of being able to make mistakes in what could be very high pressure situations in the future really I think is important in the learning process for students because I can't imagine how many students just choose to leave because of those stressful situations that you were discussing with you.

01;24;56;03 - 01;25;32;21

Scott Riley

They don't want to be yelled at. They don't want to accidentally kill somebody. And this gives them a slight step up before those more stressful situations to really feel it out and practice air for learning, like you said, which is I, I cannot under I can't overstate how powerful that is as an educator personally. The other thing that I want to talk about, you know, we've talked about usability satisfaction and you mentioned that you go through a rigorous validation process, but can you talk about the outcomes of these trainings with regards to transfer of skills to the real world?

01;25;32;26 - 01;25;44;13

Scott Riley

Does from your studies and from independent studies from Johns Hopkins, do you see that this training is effective and can be useful for students as they make their way through their academic career?

01;25;44;16 - 01;26;15;25

Jack Pottle

Absolutely. So the says a lot of the studies that have come out, including the ones from Hopkins and the NHS and other institutions around the world, have shown that in terms of efficiency and effectiveness, VR simulation is more effective than any kind of didactic training or e-learning because it makes you feel like you are there and it is equal, if not more effective, to what we do in physical simulation and again, I would caveat that to be able to say there are things physical simulation does that we don't do.

01;26;15;25 - 01;26;37;06

Jack Pottle

There are things we don't do that physical simulation doesn't do. But that's the level that we are looking at. It is just as effective, if not more effective, than what we're already doing. We see by making people, by allowing people to go through a mass that their scores in VR improve over time, you could see that performance improving in virtual reality scenarios over time.

01;26;37;08 - 01;26;59;15

Jack Pottle

What we and we also have evidence to your point previously of that confidence improving on that

perceived competence improving. So people think that going through a mass, they will change that practice in real life and improve what we have not yet goals and interestingly, what physical simulation has never got over the 40 or so years that it's been out.

01;26;59;15 - 01;27;24;08

Jack Pottle

There is evidence of practically how that relates to changes in patient care down the line. That is the Holy Grail that we are trying to get from all of this. We did not hear about evidence, but we have preliminary evidence of it in sepsis in a hospital system in Illinois. But it is definitely something that we have not yet got fully researched or mapped out.

01;27;24;10 - 01;27;46;18

Jack Pottle

If people are interested in doing research on it without a mask, we'll be delighted to hear from you. It is absolutely where we're going with this. And in many ways I talked about impact of scale. That is, the outcome of impact at scale is the ability to change patient outcomes and having evidence to be able to prove those outcomes is where we're going with it as well as in health systems, the evidence of return on investment.

01;27;46;23 - 01;28;03;00

Jack Pottle

And that is what we do have a lot of is being able to say if it's of equal efficacy, efficacy as physical simulation, but is available, scalable, repeatable and reduced cost, that return on investment in health systems is very much evidence that we do have.

01;28;03;02 - 01;28;31;02

Scott Riley

Yeah, and those are those are very important aspects. And going back to what you mentioned before and quantifying educational outcomes is the Holy Grail for a lot of education research, right? Because we we study what I would argue is one of the most complex scientific systems in the world, the human learning process. And so I'm really excited to look back at your company in five years and see what other cool things you've been able to measure based off of more data coming in.

01;28;31;02 - 01;28;45;19

Scott Riley

And so with that, I'm I've been holding this question back and I want to ask it now. I feel like this is the right time to ask what's next for Oxford Medical Simulation in terms of education? What's your newest in course project that you can tell us about? You know.

01;28;45;21 - 01;29;17;04

Jack Pottle

I always I love this question. I never quite know where to start with it, but I'll pick a pick on a number of elements that we're doing. So one is and I'll talk about this broadly, is the the integration of AI and VR is huge. The ability to use it to make the scenarios more realistic, to produce more scenarios, and to produce patients with whom you can have a totally realistic human interaction.

01;29;17;04 - 01;29;49;01

Jack Pottle

Because that's what I is doing is phenomenal. So A.I., in terms of the scenarios, is one of the things I'm most excited about, and it plays into a lot of what we do now, our internal processes, some of the new products that we're bringing out in the ice space and in the analytics space as well. So if I can have AI as a bucket that I'm excited about, I would I think some of the projects that we're doing in AI, particularly around the AI controlled patients in communication skills, is some of the most interesting.

01;29;49;03 - 01;30;20;00

Jack Pottle

So de-escalation scenarios, training doctors and nurses, how to de-escalate angry patients, teaching them how to empathetically discuss difficult decisions, how to break bad news with patients, how to communicate in an educational way using motivational interviewing, all of these scenarios that we're building, using AI. And that's a fascinating element that we're driving. And so the other one that I tend to talk about other more hardware and technological buckets.

01;30;20;02 - 01;30;50;21

Jack Pottle

So it is we've built in virtual reality because it's a really good way of scaling training, increasingly virtual reality, augmented reality and mixed reality are becoming a continuum, a rightly becoming a continuum. And by that I mean that's reality. You put on a headset, your whole world is virtual augmented reality. You have something overlaid on your real world, and mixed reality is the whole spectrum between that and these headsets you may have seen the Apollo bringing out.

01;30;50;21 - 01;31;08;10

Jack Pottle

For example, you can literally move between virtual and augmented reality quite smoothly. And I think that technologically is going to be very interesting for the space of education and training is using those different modalities of immersion in different ways to meet different objectives.

01;31;08;12 - 01;31;21;05

Scott Riley

One thing I like to ask during these conversations is what do you think is currently moving the needle? Education or what is changing the landscape of teaching? And it's totally okay to say Oxford Medical Simulation.

01;31;21;07 - 01;31;56;16

Jack Pottle

I think you put me on the spot there. I, I wouldn't just say Oxford Medical Simulation. We are a company at the leading edge of this, I think VR and A.I. in health care education as a whole is moving the needle. Yes, I think we're the leader in it. I would say that I'm the founder and chief medical officer, but this whole space is going to continue to dramatically change over time and the upswing in people using this kind of technology over the last two years has been phenomenal.

01;31;56;18 - 01;32;19;28

Jack Pottle

And that will continue to grow, not just in the US and the UK, but globally, and not just in medical education and nursing education, but across the whole of healthcare. So I think the technological innovations that we and other people are using in this space has the ability to fundamentally change how we think about healthcare education over the next ten years.

01;32;20;02 - 01;32;24;27

Jack Pottle

And that's the thing I'm excited to be part of and for us to be spearheading is on as agreed.

01;32;24;27 - 01;32;46;07

Scott Riley

I think it's a really good time to be an educator who is enthusiastic about technology. Just based on what you said, there's a bright future for anybody who wants to incorporate VR and other kinds of augmented reality into education. So, Dr. Powell, thank you so much for taking the time to speak with us today. Really appreciate you being a guest on the show.

01;32;46;08 - 01;32;56;12

Jack Pottle

Not at all. It has been an absolute pleasure. I'm happy to come back on any time and pontificate about the world of VR. And I great speak to you.

01;32;56;15 - 01;33;10;08

Scott Riley

Thank you for joining us today. On moving the needle. Visit us at [U. Maryland edu slash fc t l](http://U.Maryland.edu/slash/fc/t/l) to your additional episodes. Leave us feedback or suggest future topics. We'd love to hear from you.