Erin Burr: I ended up doing about, almost two years as a post doc at ORAU and I had the opportunity during those two years to gage in program evaluation and research projects across a number of different sponsors. Which I found really enjoyable because I don't know if other people want to spend their time doing the same thing always, but I love getting to change it up and try out different programs and different kinds of projects. It keeps it interesting. And so [crosstalk 00:00:35] I found this to be a really great home for me.

Speaker 1: This is the ORISE Featurecast, a special edition of Further Together, the ORAU podcast. Join Michael Holtz for conversations with ORISE experts on STEM workforce development, scientific and technical reviews, and the evaluation of radiation exposure and environmental contamination. You'll also hear from ORISE research program participants and their mentors as they talk about their experiences and how they are helping shape the future of science. Welcome to the ORISE Featurecast.

Michael Holtz: Welcome to another episode of the ORISE Featurecast. I'm your host, Michael Holtz and we are celebrating all things, postdoc experiences because it is national postdoc appreciation week. Our final conversation for this year series is Erin Burr, who works for both ORISE and ORAU. We just had a great conversation the other day about her experience, about what she does, and about the value of the postdoc experience. So give it a listen, I hope you enjoy this episode.

We are celebrating national postdoc week with actually two weeks of conversations with folks from ORISE and ORAU who have had postdoc experiences. One of those people that we're speaking to, I am pleased to have on the show this week is Erin Burr. Erin Burr, welcome to the ORISE Featurecast. How are you this morning?

Erin Burr: I'm doing well. Thank you, Michael.

Michael Holtz: Tell me what you're doing at ORISE and ORAU, cause I know you work for both organizations. Tell me [crosstalk 00:02:22] what you do for ORISE and ORAU today?

Erin Burr: Sure. I currently work as a Senior Evaluation Specialist and Project Manager for the assessment and evaluation group in ORISE and within the STEM WD group. And I also do a lot of work for the OGS side of our company or ORAU government services and do very similar stuff, just for a different set of clients. And most of what I'm doing is program evaluation or evaluating educational workforce development program experiences to determine if the programs are working and if they're effective in meeting their goals and objectives and how they can be improved.

Michael Holtz: Awesome. So, you're essentially sort of a 3rd party observer [inaudible 00:03:20] look evaluating the effectiveness of a program. I also know you've done some work on sort of continuity of, if I've been in an ORISE research participation experience, am I still involved in a STEM career? Excellent reviews later, that sort of thing. So you do a lot of different kinds of [inaudible 00:03:44].

Erin Burr: Yes, that's accurate. We do evaluations of programs that we are looking at just over a summer program, after a few weeks of an experience. How did that impact them? But what you're referring to is one of our longterm impact studies where we're looking at the kinds of outcomes that you can only measure years after they have completed a program. Because when somebody exits a program, you can ask them, how did they like it? How did it go? But you don't know, will they go on to achieve additional degrees? Will they get a job in the area that they were getting trained in? And so these longterm followup studies are our opportunity to follow up with alumni from our programs, and find out about those outcomes and see if they've been successful. Which many of them are.

Michael Holtz: I'm just going to say yeah, we know and I know from talking about your work in other forums that we see that the programs are successful. With sort of 85 and I think 96 and other high numbers of retention rates of people that stay in STEM fields or related after they've had an experience and an ORISE research participation program. So, it's pretty amazing the work that we do as an organization.

Erin Burr: Exciting.

Michael Holtz: It is. So let's take a step back because your work is pretty specialized. How does one get from, say middle school, high school, maybe someone with an interest in science to becoming an Evaluation Specialist?

Erin Burr: Sure. So my particular path through the STEM workforce development pipeline was I've always loved science and all things STEM. I've been fascinated growing up in the country next to a state park. I was very enamored with nature. And so all the science classes or things that stood out to me, I ended up being president of my math and science club in high school and continued to have those interests. But I had so many interests, I didn't know what I wanted to do.

I went into college as an undecided major and took a little bit of all kinds of sciences, astronomy oceanography. But what I found is I loved all of the social sciences the most. I took anthropology and sociology, but I ultimately settled on psychology because I'm fascinated with human behavior. And so I got my bachelor's in psychology, general psychology, and then decided that I really liked all areas of psychology. So very much like I was in science, it was very hard for me to narrow it down. So I did a master's degree in psychology after that so that I'd have a little bit more time to figure out what branch of psychology I wanted to ultimately specialize in.

And I was thinking clinical would be the way I'd go, but I ultimately discovered through some of my research experiences in graduate school program evaluation. I always thought that everything in psychology had to be either experimental or clinical. And I did not realize that there was this whole other side of things where I could do program evaluation, it uses all the measurement and data collection methods that I was familiar with. And so I applied to a doctoral program in applied experimental psychology, and I did a year there. Then my advisor took a job at university of Tennessee.

And when you're a grad student, you follow the funding. So I came to transfer to UT as a doctoral student after my first year into their educational psychology and counseling department, in educational psychology and research PhD program, focusing on evaluation and assessment. And ultimately that's what I got my doctorate in. I had been focusing on evaluating the variety of public health programs and STEM related education programs, a lot of college readiness type things. And I focused my dissertation on evaluation use and influence. Because why evaluate anything if you're not using that information to make things better?

Michael Holtz: Right, right. That makes perfect sense.

Erin Burr: And from there I had a class, one of my doctoral classes. I had a classmate that worked at ORAU.

Michael Holtz: Okay.

Erin Burr: And so that's how I learned about ORAU because I was in Knoxville and Oak Ridge is a long way away when you're just a student in your world centered around school. But it really wasn't that far, and I ended up after graduation doing a postdoc at ORAU, doing program evaluation with that classmate, who ended up being my mentor, actually. [inaudible 00:09:07] I ended up doing about almost two years as a postdoc at ORAU and I had the opportunity during those two years to gage in program evaluation and research projects across a number of different sponsors, which I found really enjoyable because I don't know if other people want to spend their time doing the same thing always, but I love getting to change it up and try out different programs, and different kinds of projects.

It keeps it interesting. And so [inaudible 00:09:43] I found this to be a really great home for me. I evaluated, let's see the extreme classroom makeover program for ORAU. [crosstalk 00:09:54] The first opportunities I had at ORAU. Then I did a lot of data analysis support for the Joint Genome Institute for DOE. And it was a survey that I was analyzing and providing data back to, I think as 100s of universities that were using courses on genome annotation from the Joint Genome Institute.

I also analyze data for the Oak Ridge leadership computing facility. We do an annual survey for all the users of the super computing group and or super computers at ORNL. And so I got to look at a whole different type of data set, very technical feedback from people because these are very technically inclined people doing lots of complex data analysis process. So I learned a whole lot just analyzing the data about different fields, and I found it fascinating. I also got to analyze data from surveys for all 17 of DOE national laboratories, across five different workforce development programs. A few of them are still in existence, but [crosstalk 00:11:14] I had a lot of different really cool experiences.

Michael Holtz: That's really amazing, and also fascinating as you've said, because you get to learn about all of these different programs and all of these things that otherwise you wouldn't know about. But also see what drives other people, in those experiences and, what did they like? And what didn't they like? And how would they change it? And all of those things, that's really has to be a fascinating topic. I'm personally not a statistics person, but I can see how that would be really, really interesting to see. And especially when you can measure the success of a program. How successful are we doing with the work that we're putting out there? Or the experiences that we're creating for research participants or K through 12 students and teachers who were doing summer programs and those sorts of things.

Erin Burr: Yeah. And it's nice because none of these are programs I'm evaluating that I was a participant in. However, as a postdoc, when I was evaluating other postdoctoral experiences or other graduate experiences, I have a vested interest in seeing that they're getting good quality data to help improve their programs.

Michael Holtz: Mm-hmm (affirmative).

Erin Burr: And to show what's working, what's not. And it's not just statistics, it's also qualitative data analysis. There's qualitative feedback we get, and so I get to go and look for themes and what people have to share and learn about in their words, what their experience was, which it's always nice to hear. There's always some really moving quotes about how programs change people's lives. And I think that's part of what keeps me motivated and interested in doing this because you know all these programs are having such a huge impact and are contributing to our workforce in such a meaningful way.

Michael Holtz: Mm-hmm (affirmative).

Erin Burr: Particularly, as I see through these longitudinal follow-up studies.

Michael Holtz: For you, it must be and you did say this, but it must be personally meaningful to evaluate programs, other postdoc programs, because you've been a postdoc yourself. To ensure that and to see that the programs we offer, whether postdoc, or graduate, or whatever level are meaningful for the people participating. And as you said, it can be life changing.

Erin Burr: Absolutely. I think one of the main components that I am particularly keen on evaluating is the mentorship aspect of the program. And in fact, for many of the programs that I, or my team evaluate, we have a specific component of that evaluation. Where we collect data from the mentor about their own mentoring skills, their evaluation of their own ability to mentor, as well as their history and experience mentoring. What motivated them to choose to serve as a mentor and also to find out, what did they gain from this participant in terms of, would they invite them back? How did they think that they're, did they contribute to their project? How would they rate them overall?

And so we can take that feedback and compare it to what the participant's feedback is to get a more holistic view of. It's not just one sided data that we're getting, we're getting multiple different stakeholder groups, including program administration. And in a lot of cases, we really look to see all different sides of a program in terms of the different players, per se.

Michael Holtz: Right.

Erin Burr: And to see how each of them has their own needs and functions and responsibilities within a program. And for every one of them, what works? What doesn't? How can it always be shifted, adjusted, improved? What training can be provided if additional stuff is needed? What resources could be improved or provided that don't exist? And I think that's been something that I've really enjoyed is focusing on the aspect of mentoring because it's such a huge component of most of our programs.

Michael Holtz: You followed someone to ORAU who became your mentor, if I recall.

Erin Burr: Yeah, I followed my advisor.

Michael Holtz: You follow, okay? Right, right, right.

Erin Burr: But I ended up meeting a student in my class who [crosstalk 00:15:54] ORAU employee and ended up that's how I learned about ORAU and came to do a postdoc at ORAU throughjust that connection that I made there. And in fact, it's really funny because before I even came to University of Tennessee, I was at a conference for the American Evaluation Association, where I met that same student before I actually entered the program. And [crosstalk 00:16:19] so it was just as fascinating all the serendipity of connections [crosstalk 00:16:24] and how you meet people and don't ever have a full idea of how much that could impact you later.

Michael Holtz: Right? Absolutely. Well, and so all of that was going to lead to, you mentioned that you have a team that you work with, and I'm assuming, you've been doing this for a while. That there's a level of mentorship that goes on as well with members of your team and other people in the organization that you sort of, you are that mentor to other people.

Erin Burr: Absolutely. I actually have mentored two postdocs as participants in a program that I was a participant in after I became an employee at ORAU.

Michael Holtz: Okay.

Erin Burr: And so I have mentored a couple of postdocs. I've mentored a number of participants that were graduate students, doctoral students, and in in program evaluation. I guess beyond participants though, yes having colleagues in a team who are at different levels of their training and in their career and serve different roles and responsibilities within the team, there's absolutely mentoring that goes on in that capacity, as well. And it's something that I can't quite describe, but it's something that makes me so happy is that opportunity to see people that you work with day in, day out, grow over the years. And yeah, I just, I love getting to see that, it makes me feel like what I do matters.

Michael Holtz: Right? Absolutely. I love that too. And it the ORISE quote unquote tagline is "shaping the future of science". And that's where science is kind of shaped is in those one-on-one relationships with mentors and participants. People being able to have those opportunities that they might not get if they weren't part of an ORISE research participation program, whether postdoc or otherwise. So I think that's exciting, I think it's exciting too. I can't imagine how gratifying it would be to have that opportunity to mentor other people.

Erin Burr: And then did I get to see them later down the road in my own personal follow-up study. Seeing them as successful faculty members at universities, which one of them is, and then the other one is a principal of her own consulting business, which is very successful. So it's wonderful to see different paths that people take, but they're all still in the same area and very successful.

Michael Holtz: Right. I love it. Erin, last question for you because I am pretty sure I know the answer, but I'm going to ask it anyway for other people who are in getting their doctoral degrees and need experiences.

Erin Burr: Mm-hmm (affirmative).

Michael Holtz: I assume you would recommend highly, a postdoc experience, for any of those folks.

Erin Burr: I absolutely would recommend it. Well, you can have graduate assistantships and get a little bit more of what feels like real world experience. There's nothing that compares to a 40 hour full-time week where you're not distracted by coursework or assignments. What you're doing is immersing yourself in a mentored experience, doing what, hopefully in my case, I ended up doing as a career and it was something that positioned me perfectly to do what I do. I learned the things that I wouldn't have gotten out of my coursework or my assistantship, and I did many assistantships, which also prepared me very well, but I think this fit a different piece of the pie to help me become the successful person I've become and I wouldn't trade it for anything.

Michael Holtz: Awesome. I'm going to leave it at that. Erin Burr, thank you so much for sharing your story and sharing about your postdoc experience with us. I appreciate it.

Erin Burr: You're most welcome, and thank you for having me.

Michael Holtz: Talk to you soon

Speaker 1: Thank you for listening to the ORISE Featurecast. To learn more about the Oak Ridge Institute for Science and Education, visit ORISE dot ORAU dot gov, or find us on Facebook, Twitter, and Instagram at ORISE connect.