

# 23 - Tom Brush on Needs Assess...ng and Performance Improvement

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Needs assessment, performance improvement, learning strategies, instructional design, data collection, analysis techniques, training needs, organizational problems, inquiry-based learning, collaborative research, educational technology, problem-based learning, action mapping, stakeholder engagement, research methods., Learning and Performance, Needs Assessment, Tom Brush, Patrick Healy, podcast review, subscribe button, wider audience, feedback improvement, social media share, PJH services, learning experience design, performance consulting, research and writing, coaching.

## SPEAKERS

Patrick Healy, Tom Brush

### Patrick Healy

Patrick, welcome to the Learning and Performance podcast, the show where we explore ideas, strategies and tools for enhancing human learning and performance. I'm your host. Patrick Healy, learning and performance are inextricably connected. If we can't learn, we can't grow, can't grow, we end up hitting plateaus, repeat the same mistakes, stagnate and fail to reach our potential. When we improve our ability to learn, we enhance our ability to perform at a higher level. Today, high performance in more and more domains increasingly depends on rapid learning. Whether you're a student, a researcher, professional athlete, this show discusses research and practices that you can use to learn faster and perform better. Welcome back everyone to the Learning and Performance podcast. I'm your host, Patrick Healy, and today we're diving into the topic of needs assessment. I've received a lot of requests for this one, so I'm very excited. Today we're exploring needs assessment, and its crucial role in facilitating learning and performance improvement. Needs Assessment, or needs analysis is a structured process used to identify performance gaps and determine the underlying causes in order to design and develop solutions that address them. It's an essential tool in every designer's and consultant's toolkit for making sure we're solving the right problems and targeting our efforts where they'll have the greatest impact. Needs Assessment is important because too often learning and performance initiatives are developed based on assumptions, not evidence. When those assumptions are wrong, though, it can lead to a whole lot of wasted time, money and effort, not to mention stress and shouting when the problem is not solved. Whether you're designing training, launching a new program or trying to improve results in your school or organization, a solid needs assessment can help you clarify what's really needed and what the best design solutions are for meeting those needs. And spoiler alert, it's not always training to explore the topic of needs assessment. I've got a great guest today. I couldn't think of a better way to explore it than through

speaking with Tom brush. Dr Tom brush is the Barbara B Jacobs chair in education and technology, and a professor of instructional systems technology or ist at Indiana University Bloomington for over two decades at IU, Thomas trained hundreds of masters and doctoral students in instructional design, needs assessment and program evaluation, among other topics. His research focuses on designing and integrated inquiry oriented, problem based strategies into learning environments, with a special emphasis on student collaboration and real world learning and application. Tom's authored more than 70 publications and has served as pi co PI, or evaluator on numerous projects, including those supported by the National Science Foundation, the Google Foundation, the National Endowment for the Humanities and others. He's an experienced educator who's worked across K through 12 higher ed and many other contexts. And above all, he's just a great guy. I want to speak with Tom about needs assessment in particular for three reasons. First, Tom has a deep well of expertise in needs assessment, not just the theory of it, but the real world application. He spent decades conducting assessments in a wide array of contexts, from higher ed to K through 12, military business and beyond, and he spent even more years at this point teaching his students how to do them well. In short, Tom has the knowledge and the ability to impart it in others. I think you're in for a treat. Second, while many people on L, D and leaders say they care about solving the right problems. In practice, needs assessment is still too often skipped, rushed or done through a bias lens. So I wanted to speak with Tom for him to share some concrete, actionable advice and how to conduct a solid needs assessment and offer tips to overcome the obstacles that get in the way. Last but not least, Tom's actually my dissertation advisor at IU, and he's a true mentor. I always really enjoy our conversations. Tom's incredibly knowledgeable, humble, and has a great sense of humor. He's also got this infectious laugh that makes our discussions really. Really fun. I don't know about others, but I can not meet with Tom and leave feeling supported and encouraged. In our conversation, we hit on a number of interesting topics relevant to learning and performance, including the difference between needs assessment and needs analysis, and why the terms aren't interchangeable, how to define a need and identify the gap between current and desired performance, the two major types of needs assessment and when to use each why training is not always the right solution to a performance problem, the most common mistakes and biases people bring into the needs assessment process and how to avoid them. Practical steps for collecting and analyzing data, even when resources are limited. How to make the case for needs assessment when leadership wants to skip straight to the solutions. What to do when your findings from needs assessment are politically sensitive, tools, frameworks and readings to strengthen your needs assessment skills and a whole lot more, whether you work in design, consulting, teaching, training, or really any role where you solve problems improve performance, I think you'll walk away with some practical ways to make your efforts more targeted, effective and impactful. And with that, I bring you Tom brush, all right, I'm here with Dr Thomas brush. Tom,

**Tom Brush**

welcome to the show. Thank you very much for having me. It's good to be here. Yeah,

**Patrick Healy**

excited to have you. So I'll have introduced you in the pre show before but just from your perspective, who are you?

**Tom Brush**

Well, I'm a professor of Instructional Systems Technology at Indiana University, Bloomington within the School of Education. Been a professor at IU since 2002 before that, I was a professor of educational technology at Arizona State University, and I started my professorial career at Auburn University in 1995 so I've been a professor now for, God forbid, almost 30 years, and done a variety of different projects, worked on different research and so on.

**Patrick Healy**

Yeah, you've done a lot of research, a lot of teaching, I know in the IST program, the Instructional Systems Technology program, which I'm a part of, Tom's actually my advisor, as I mentioned on the pre show before. But I think you've taught, like all of the classes, basically in the program at some point, pretty

**Tom Brush**

much, pretty much all of them. Yeah,

**Patrick Healy**

two classes I know that Tom teaches quite well are the needs assessment class and the evaluation class. And we had done an episode with Elena schlatka on evaluation, and I thought, No, it'd be a good guess for the needs one Tom, he'd be great. We're going to dive deep into needs assessment today, but before we do, I want to start with three questions I just ask all of my guests. This is the Learning and Performance podcast. So how do you define performance? I'd say performance

**Tom Brush**

is defined as and I'm glad you delineating performance versus learning. I'd say performance is something that you can observe, and it has to do with the process of completing tasks that either need to be completed or ones that you've been assigned to complete. And high performance is being able to effectively complete tasks that need to be completed, regardless whether it's in the workplace or at home or whatever, and efficient and timely manner. And I say that because you could have performance and like you were asking about what does high performance look like? You can perform something and get something done, but if it takes you forever to do it, then that's not necessarily being a very efficient performer. Whereas if you can complete something and do something well and also do it in a timely manner, that is efficient, then I would consider that to be more of a high performance.

**Patrick Healy**

Yeah, so observable, some measure of efficiency, effectiveness and completing tasks. I also heard in there completing the right tasks. Some element of the task need to be done. Yeah,

**Tom Brush**

you can be a good performer at bad things. Yeah, Barbie, I did this really well, but it wasn't what anybody wanted me to do, or it wasn't what I was supposed to do, so therefore it wasn't great performance,

**Patrick Healy**

definitely. How about learning? How do you think about learning?

**Tom Brush**

I think learning as being something that's much more personal, I guess is the best word for it. Learning is understanding. Information is understanding processes and procedures in a way that helps you perform. Mm. Whatever that performance may be, and you can learn in a variety of different ways. You can learn by observation. You can learn by collaboration. You can learn by examination, I guess, or delving into content personally. The other thing about learning that relates and doesn't relate to performance is, I see you can control learning, your own learning, and you can decide to learn something whether it has anything to do with a performance that you're asked to do or not. So I can learn just for the sake of learning, like I can decide, oh, I want to learn more about this Civil War battle because I'm interested in it. It doesn't necessarily mean that it's going to help me with performance in any task whatsoever that I may have in the future, other than talking to other people who may have a similar interest. So learning can be performance focused, and it doesn't have to be performance focused. On the other hand, you can learn to help you perform better at different things that you either want to do well or asked to do well. And so you can be asked to do a task as to perform something or perform a task, and you may or may not have all the skills and abilities in order to do that. And so you'll need to engage in some form of learning or acquisition of knowledge or skills in order to be able to adequately perform a task that's something that's much more overt and guided in turn or focused, I guess, in terms of what you want to learn. But learning doesn't have to be related to any specific type of performance that you have to do? Yeah.

**Patrick Healy**

So it sounds like performance is always focused on tasks that need to be completed or you want to complete. Learning can be sort of a means to performance. It can help you perform better. But there's different types of learning. There's different areas of life in which you learn, and it doesn't need to be a link to performance. It could just be learning for the sake of it, and sounds like it kind of depends on the context too. Yes, definitely. Yeah. Well, you kind of answered my third question in there. Kind of a link between learning and performance. So we can skip that one. Now I want to talk about needs assessment. So you've been teaching needs assessment at IU for a while, or needs analysis, some people call it. What initially drew you to the topic?

**Tom Brush**

I was a technology director at a school just north of Detroit before I started my professorial career, I guess, and I had been completing a doctoral program at IU because I got my doctoral degree at IU as well. And my degree was a combination of Special Education and Instructional Systems Technology, which people may not see that the how those are related, but I see them as extremely related. And a lot of the things that you do in IST when working with an organization, are similar to things that you do when you're working with a student with special needs in terms of determining what the needs are of an individual in order to help them learn something, in order to help them perform better, and so on and so forth. And so it's really started off with more individualistic kinds of needs analysis in terms of identifying what the gaps were when an individual would say special needs with regard to what they needed to be able to do and how to get them to do that. And so from a personal level, that kind of got me really thinking about needs assessment, needs analysis at the individual level. As I moved into working for the school and beyond, it got more into organizational kind of needs assessment where we're looking at

we wanted to upgrade technology for the school or and we wanted to help the teachers in terms of utilizing technology. And so you couldn't just make assumptions about what the needs of the school were and just make decisions based on those assumptions. I mean, you can. We'll talk about this later, I think, in more detail, but many times when you do that, the assumptions tend to be wrong or they don't tell you the whole picture. So within that context of working for a school, I really had to collect data and analyze what the organizational needs were from a technological standpoint, and then once we looked at that, we also had to look at the staff, the teachers, and figure out where they were from, their knowledge level or usability level of technology, and where they needed to be, and how do we address that gap? And so those were some practical uses of needs analysis, both from a personal level, as my with my knowledge of special education and organizational level. People and working at a school. And then from there, it got into I was working with the army, with the military, and working with many of their staff that were training developers. And most of the people that are training developers in the military are ex military, so usually they've retired from the military, and they're civilians, and they have a great deal of content knowledge, but not as much knowledge about instruction, training, the things that we do in IST and so one of the things that they asked me to do, one of the areas they asked me to work on, was analysis, because they have very little knowledge of that, and that got me into designing some curriculum and designing activities for that population. That got them really thinking about the importance of doing an analysis before you start designing instruction, the importance of being able to justify what intervention you're going to design and implement with a particular population, whether it be soldiers, whether it be staff, so on. And once again, that all has to do with needs assessment and needs analysis. And then lastly, I was at you, and it's interesting that. I mean, I have this background in analysis, but I didn't really teach the needs assessment or analysis class because I had other classes to teach. But then when we had some faculty that were very interested in this area and had been teaching the class, when they got other opportunities and decided to leave the university and go elsewhere, there really was, and I say this, a gap in our faculty kind of expertise in areas in terms of teaching these types of concepts in this class. And so I slid into there, because one, and I'm not sure if other faculty were that excited about teaching it, and two, I thought, well, I have some all these different experiences with this, and this will fit very well in terms of me teaching. So that was a few years ago. I'm not sure exactly how many, and so I've been teaching the needs analysis class ever since,

### **Patrick Healy**

yeah, very cool. I actually didn't know that. Yeah, you know, when you hear special education and ist the link doesn't come so clearly to my mind either, but that makes total sense. Would you say? I mean, there's different programs have different labels, but you were assessing some special needs of individuals, which makes total sense. And then over the course of your career, it sounds like you moved out more to the organizational level with the army, and then teaching needs assessment. At IU

### **Tom Brush**

not to go too much off on a tangent, but you look at the two fields, I mean, when I look at special education, what we're constantly doing with students with special needs, with individuals special needs, is we're trying to work with them to determine what their needs are in terms of being able to be better learners, be able to address a disability and so on. And then what do we do? We design interventions, you know, we look at it, we say, Okay, let's see what we can do and design something that can help you be able to do what you need to do. And so you look at that, and you look at what do we do on ISD, in

terms of design proof, to me, it was like they fit together perfectly. Yeah. Tom just for listeners who are not so well versed in needs assessment or needs analysis at a very basic level, what is a need and what is a needs

**Patrick Healy**

assessment?

**Tom Brush**

That's a great question, and that's like my first lecture class in the class itself. So basically, you can define a need is, if you look at it from a technical term, so you have what's happening in your organization, what people are doing. That's the current state, okay? And typically, when something goes wrong, that means that what someone's doing isn't what you want them to do, or isn't what needs to be done within an organization. So basically, what a need is, is that gap between the observed performance and the desired performance. That gap is a need Okay, and all a needs assessment is, is trying to find out why that gap is in place and what you can do in order to try to either eliminate that gap, so you get people doing what they need to do, or at least understanding why that gap exists. And so that's kind of the difference between, in my view, because I'm asked this all the time, what's the difference between a needs assessment and a needs analysis? Well, I mean, the basic difference is a needs analysis tends to go a little. Farther than a needs assessment. Needs Assessment usually stops at identifying what the gap is and what might be the reasons why the gap exists. A needs analysis end will take that information and then try to determine what you can do to try to address that need. So what might be some ways to assist an organization in eliminating that gap. And so the assessment itself is figuring out why the gap exists. The analysis then goes and takes that data in order to try to determine and provide recommendations or suggestions for how to address the need or address

**Patrick Healy**

that that makes sense. So, yeah, the assessment is really there's some standard, and the current state does not match the standard of a desired state, and the assessment is gaging the gap needs assessment, sometimes called gap assessment, or gap analysis, I

**Tom Brush**

know, or gap analysis. Some people go, I think six sigma calls it a gap analysis for six sigma people. My wife's a Six Sigma person. So,

**Patrick Healy**

yeah, yeah, there's a lot of lingo out there, but there's some gap. And then the analysis gets into why is it occurring, and how do we solve

**Tom Brush**

it? How do we eliminate the gap? Exactly, what are some of the different types of needs assessments, there's two different areas of needs assessment, and you'll hear people talk about this. So there's a general needs assessment or needs analysis, where you're trying to understand a performance problem in an organization and figure out why that problem exists, and you go into that situation with, hopefully with kind of a blank slate where you're open to the causes of the problem can be multifaceted,

and the potential solutions to the problem can also be multifaceted. It may be that you need to do a variety of different things in order to address the problem. This is why, one of the points that I make at the very early in my needs analysis class is that training isn't always a solution to a problem. It's very difficult for us in IST or instructional design to say that, I guess because we're all about design, right? We're like, oh, we just training can solve everything, but really you only need training if the problem is based on a lack of skills and knowledge, and then maybe training is useful. So that's a general needs analysis. And then they also have what's called a training needs analysis, or training needs assessment, and that means you go in and you've already identified that the problem involves a lack of skills and knowledge, or a deficit in skills and knowledge among the individuals within an organization. And so you conduct an analysis and collect data to determine what the skill deficits are, and then that helps you in determining what types of training or support individuals need in order to address that particular knowledge or skill gap. And so you'll hear training needs analysis a lot. They're already making the assumption that the problem is training related. The problem is the knowledge. Now, if you put my special ed hat on, you can even look at something called for special ed, anybody who knows anything, several especially you can there's people that do behavior analysis, or an applied behavior analysis, where, basically they go in and observe an individual and observe them in the in a setting in which there's a there's a need to do something, and they're not doing it. And so they identify what it is that might be hindering someone from doing something, and then they use that information to design an intervention, and then go do another additional data collection in terms of the analysis in order to determine if that intervention so you can almost see that as being an individualized needs assessment or needs analysis in terms of Applied Behavioral but probably in terms of the just the general needs assessment needs analysis Field. Those are the two main ones you hear about, kind of the general needs analysis that's much broader in looking at any overall performance problem in a training needs assessment.

### **Patrick Healy**

Yeah, it's funny. Tom, I think sometimes in instructional design, in L and D, we tend to think training is the answer, because, as you said, we like to design things. We like to help people learn. We're big learners ourselves, but learning interventions are only one small part of broader performance interventions, right? So I find it funny how we assume training is the answer called, like a training needs assessment, but oftentimes it's more of that general level that you mentioned, the higher level needs assessment and training might come out of it. Just one potential intervention, but usually, there are other things you could do to address the performance gap. Yeah, Tom in your opinion, why is it so important to do a needs assessment?

### **Tom Brush**

Well, because unless you're positive, you know what the cause of a problem is, or a performance problem is, unless you're absolutely certain, then that's the only way you're going to determine what the cause for performance problem. So if you absolutely know that the reason why people in your organization are not motivated say to do something, and the reason is because they're just slackers, then I guess you don't need a needs analysis. But if you've identified a problem that say, Man, these people just don't seem to be motivated about this. And then you just go ahead, willy nilly trying to figure out ways to help them become more motivated, I don't know, based on the latest self help book you read, or whatever. And basically you're you're going into a situation and guessing in terms of what the

organization needs, or individuals within the organization need in order to address a performance problem. And it happens all the time. It happens in almost every organization where they see a problem they don't want to spend the time to collect any data in order to determine what might be the potential cause of a problem, and they just go with whatever the latest greatest idea is that they've brainstormed and implement it, and many times it isn't addressing The problem at all. And so that's where being a little bit more systematic in terms of analyzing what might be the potential issues around a performance problem tends to save you time in the long run.

**Patrick Healy**

Yeah, I think that in the long run is the key, right? It's so easy for leaders, or even for us in L, D, to fall into, okay, we know what the problem is. Let's just get to the solutioning. But then realize in oh shoot, what we're designing maybe we didn't get the problem right, or it doesn't actually solve the problem

**Tom Brush**

exactly. And then you spend an inordinate amount of time, resources, money, whatever, and something that doesn't do anything, or doesn't, doesn't address what the problem might be, and then you're just get mad, right? You're like, Ah, this is terrible. And then many times, see the other issue with that is that when there's a problem with, say, people, and you try something, it doesn't work, or whatever, because you haven't really spent enough time really thinking about or analyzing what might be the reason for the problem that you're seeing, then it's very easy to go and basically blame it on the people, right? It's just that they're unmanageable, or the kids just won't learn. You know, there's nothing I can do because they're just unteachable. Yeah,

**Patrick Healy**

our training was great. It was top notch, and if only they had tried harder or applied it,

**Tom Brush**

yeah. I mean, heck, we can give you lots of examples of that in society, right? Where it's like, Oh, why are these people so dumb? Why aren't they doing what I tell them to do? Yep, you know, because they didn't do a good, very good analysis and understand what might be the reason why they're not doing what you're asking them to do, or tell them to do, or whatever.

**Patrick Healy**

Yeah, then you get into, you mentioned self help before. I think a lot of business books are leaders kind of falling into this. I call it sometimes solution. It is. It's like jumping from solution to solution without figuring out what the business problem actually is. It's like, oh, my people need that, or my organization really needs this. And there's no shortage of potential solutions. There's always a business book or a thought out there for how people can improve performance, but, yeah, I think it might take longer upfront, but doing that needs assessment is really, really important. I think it was Einstein. He had this quote, If I had an hour to spend on a problem, I would spend like 50 minutes on the problem and like 10 on the solution, or might be a percentage. I'll throw it in the show notes, but I think that spirit is very important Tom what are the core components of a good needs assessment?

**Tom Brush**

The core frame of mind of a good needs assessment is an open mind. I'll start with that so you come into a situation and try to be as unbiased as possible in terms of what might be the cause of a problem. So we'll start with that. Because once again, if you're going into, and I put this in quotes, a needs assessment, where you already know what the cause of the problem is, then it's not going to be a very good needs assessment, because all you're going to do is have confirmation bias in your. Data Collection, where you're just looking at data and helping it to confirm what you supposedly already knew know as the cause of the problem. So you have to come in to the situation really wanting to know and being open about what might be the potential causes of a problem. So you come in there, you come into that. You go through several different steps. So you can start by kind of identity. You identify the problem. So there's a problem here that exists, and it can either be the people are telling you about a problem. You've observed something, you're having a gap, once again, between what's happening and what your what the desired behavior performance is. And so you've started out by saying, Yep, there's a problem. They've identified a problem. Then typically, we go through what I call like a pre assessment of the problem itself. And this comes from Maker. So there's a real nice, very short book by maker and pipe called identifying performance problems. But basically, so you've identified a problem, and then you're asked a few questions in order to determine how to move forward. So one of the questions you'd ask is, is this a problem that just you, that's just your problem, or is it a problem that really is more of an organizational problem? Because if it's a problem that's just your pet peeve, and maybe it's not worth going through the process of a needs assessment, if nobody else sees it as a problem, then maybe it's not a huge problem, right? And then the next question that major says to ask is, what happens if you ignore the problem, once again, going to is it really a problem or not? So if you ignore the problem and it doesn't have any impact on what might be the overall outcome of your organization. Then once again, we're going to is it worth the time and effort to do an assessment or analysis? So I always start by having people look at that and do like what I call a preliminary analysis. Is it really a problem that's more than just you, and is it something that if we ignore it, then it's not going to make any difference?

### **Patrick Healy**

You come in with an open mind. Try to identify the problem. You kind of gage it. You ask, Do other people see this also as a problem, and what would happen if we didn't do anything about the problem, right? It gets to the

### **Tom Brush**

level of importance of the problem, right? Because one of the drawbacks or issues with a needs analysis or a needs assessment is that it's going to take time you can do a quickie Needs Assessment just by talking to a few people and then trying to come up with your own solutions to the problem. But many times, you're going to fall into that same trap that I just talked about, where you spend a bunch of time solving a problem that doesn't match what the real solution to the problem is. So you have to decide early on, is it something I'm worth making the investment in doing some additional analysis in order to determine the cause of the problem. And then once you've done that, then you say, Okay, we're going forward. Then you typically go through some data collection, and then you kind of decide, based on what the problem is, what are the best data collection techniques? So it could involve I'm going to talk to people. I'm going to do some interviews of individuals who are intimately involved in the area where the problems occur, and kind of get their perspective. I might do observations. I might watch

people doing stuff that is relevant to where the problem, the performance problem, is occurring, to see what's going on, you know what's actually happening. You can do different types of interviews. You could do a focus group and talk to a few people at once about the issue. You could do a survey and send a survey out in terms of asking people to provide you with data to help you in determining the problem itself, but those are all different types of data collection techniques that you can use. You can go and examine artifacts and documents that are related to the problem, procedures, guidelines, training, manuals, job aids, those kinds of things to see if perhaps those materials are not adequately providing the information needed to be able to perform adequately, and so all those different data sources you can use, you have to decide which ones might be more useful or not in terms of addressing the problem. Once you've collected that data, then you look at the data and look for patterns. Is like, what are different data sources telling me a similar story in terms of what might be a potential cause of the problem? Are people telling me that there's an issue with this particular piece of equipment, and then I observe people using the equipment, and I see that they're having issues using the equipment. So that's kind of giving you a little bit of triangulation in terms of that might be a potential cause of the problem. So you analyze the data, looking for those type of patterns, looking for multiple sources telling you what might be the cause of that problem. And then your final in the assessment itself. Component of the assessment is kind of you summarize that. You look at the data, you look for those trends, and then you summarize those trends in order to say, here's what I see as the causes of the problem. Now, the cause of the problem can be multifaceted, as I said. It could be the cause of the problem is a lack of knowledge and skills. It could be the lack of resources or equipment that are needed. It could be a lack of proper supervision or organizational structure and so on and so forth. You have to be willing to be able to look at the data and have it tell you what areas of problems that might be occurring in order to see where that gap exists. And then if you want to move on to the analysis, then you use that data in order to try to say, Okay, here's the problems we're seeing, here's what we're seeing. Are the causes, what might be some interventions that we can implement that might help address the problems? Do individuals need specific training? Do they lack some skills and knowledge in areas that could help them? Do we need to upgrade equipment? Do we need to reorganize the office. Do we need to provide additional incentives for people to be more willing and so on? So those are kind of the steps that you go through in terms of the needs assessment and into an analysis.

### **Patrick Healy**

Yeah. So after you determine, Okay, this is an important problem, you collect some data. Could be through interviews, could be through focus groups, could be through analyzing existing documents, talking to people. There's no shortage of things you could do, but you gather the data and then you analyze it to figure out, okay, what are some common themes here that I'm seeing? You mentioned triangulation. So am I seeing this theme and in multiple sources describe similar way, and then, based on that, prioritizing, okay, what do I think are the main causes here? And based on the list of priority causes, prioritizing a solution, correct, recommending a solution that'll work.

### **Tom Brush**

And that's a good point you just made. Usually, when you provide that in a good analysis, will prioritize it. Because if you just give somebody, once you've done an analysis, you give somebody, here's all the things you should do most of the time, they're going to throw it back at you and say, I can't do all this. I mean, this is going to take us a long time. And so what you want to provide them is with kind of a

usable analysis, where you can say, if you can do nothing else, start with this. This, I think, is probably the main intervention that can address a majority of the reasons for this problem. Yeah, and then go from there, because that's what they're going to be asking,

**Patrick Healy**

yeah. And in terms of the causes, I like to think about it sometimes as is the cause more people oriented, or is it more environment oriented? I think we've mentioned this in a few podcasts now, but I think oftentimes, you know, we're in people development, right? So we assume the problem probably the people. But in actuality, oftentimes it's part of the environment. It could be job design, workplace structures, organizational reporting, relationships, performance incentives. It's hard to train people, so if you can change the environment around them to make it easier for them to do their jobs, that's probably a lot better first pass solution to try

**Tom Brush**

well. And what you're mentioning is it's a reading that I have all the students read early on in the class. It's an article by David Weil, W, I, L, E, and I've never met him. I like to call it an oldie, but goodie. It was published in 96 so it's almost 30 years old, but the title of it is why doers do and what it does is it outlines all the different potential reasons there for performance problems in one concise article. And I really like it because it immediately gets people thinking about the multi faceted nature of a performance problem and that we cannot just jump to a conclusion that training is always a solution to the problem. It's not a very long article, but it's very interesting in how it's a very thoughtful piece that really got me thinking about how there can be such a variety of different reasons for a problem or cause of. Problem? Yeah, I

**Patrick Healy**

love the process you described. Can you walk us through a real world example, or maybe a case study where you conducted a needs assessment, maybe using some of those steps and it made a big difference?

**Tom Brush**

Well, I'll give you the fun one first, because I tell this story in my class, and it's one that that I was told by one of my professors when I was in the program, and his name was the short name was tiagi his name was Siva silem tiagarajan, and he's still around. He's a big performance guy, but he graduated from IU in our program, so that's why we like it. But he was teaching a class, and he was explaining the importance of collecting data in a needs analysis. And he gave the story of how he was hired by a company that it was a food processing company, and they were having issues with injuries in the workplace, and so they brought him in, and And back then, the big thing was video, disc and video based training. And so they brought him in and said, Hey, we're having all these problems. We'd like you to help design a video based training program to help address these workplace injury issues that we're having that we don't want to have workplace injuries. So there's a problem, right? So you've got what you're observing, there's injuries. You got what you want, no injuries. There's the gap trying to figure out how to alleviate the injury. So he's like, Okay, well, do you mind if I do a little data collection before I decide or agree to take on this project, like, oh, sure, no problem. So he went and he talked to people that were involved. He found out where the primary area within the food processing plant was

that where a lot of the injuries were happening. And he went and talked to people, he observed them working, and he found that where the injuries were occur, that the injuries tended to be burns on the hand, forearm, that kind of thing, which I thought was pretty interesting, and was curious about that. So he observed, and he found that people were working around these big vats that they'd throw stuff in, you know, whether it be coconut oil or other different oil, and they have to heat it up, and then they use the oil itself and spray it on different stuff. But they had to wait. And it was kind of a boring kind of job where you put the stuff in a big vat, you turn it on, you wait a long time for it to heat up, and then you do the thing, and things got hot. And what happened was people were getting bored and lazy, and they'd lean on stuff. Instead of sitting down, they'd lean on stuff. And inevitably, what was happening is some people were forgetting about these vats being really hot, and they'd lean on the hot parts and burn them. And so he was like, Huh? He went back to the head honchos of the organization, and he said, Okay, I think I've done my preliminary analysis here, and I am more than willing to do the video training project for you. Like, Oh, that's great. What's your budget? He goes, Oh, the budget, I think it's going to be about 100 \$200,000 they're like, oh. Said, Well, that's pretty pricey, but it's important. He said, I have another alternative solution. They said, what would that be? He said, I could go to a store and have them print up a whole bunch of signs that say caution hot and stick them all over the place so that people remember that they had hot stuff around, and that would probably solve your problem, and I'd only charge you, like, \$5,000 for the time I spent looking at this. And so they went with option two. But basically his example was going through a process of, you know, there's a problem, no question about it, and other people were seeing it as a problem. It wasn't just the couple people in the organization, yeah, very important, right? It was important. It wouldn't be a good job to ignore the problem, right? Because people were getting hurt. So he went through the process of data collection, collected multiple sources, analyze the data, saw what he's considered to be the primary cause of the problem, then came up with an intervention that didn't necessarily involve training at all. It involved changing the workplace environment a little bit, or altering it so that it addressed what the particular cause of the problem was. So that's a fun example that I like to use.

### **Patrick Healy**

I never heard that, but he really did a needs assessment and recommendation, and it seems like a couple of hours. Well, I think he probably

### **Tom Brush**

took about a week. I mean, I kind of condensed it, but that's basically a great example, and a great example of how you can jump to a conclusion about training is always a solution when it isn't. And maybe the training would have helped, right? Maybe they would have said, just remember, don't touch this or these things are hot or whatever. And maybe that would help too, because it'd bring more awareness and all that. But let's start with the cheap solution first, and then see how that works. And hopefully that addresses a problem and that increases the awareness so that you don't have to do this training to try to address this problem.

### **Patrick Healy**

Yeah. And what I liked about that too, Tom is the solution was embedded in the workplace, right? Like he could have created the video based training, and they could have told them, make sure to remember this will be hot. If you're bored or something, or you're shooting the breeze of co workers, you're not

gonna remember that, right? Whereas, if you see, oh, okay, caution, I'm gonna stay away from this thing

**Tom Brush**

exactly. Yeah. Tom in your experience, how do you

**Patrick Healy**

make the case for doing a needs assessment, especially when leaders wanna jump kind of straight to solutions, any

**Tom Brush**

tips? That's very difficult, because it happens all the time. It's like, I tell my students, probably one of the most common or well known models, as they say, of our field in terms of instructional systems, is the Addy model, right analysis, design, development, implementation, evaluation. And so I always tell my students, it's like, there's a reason why they have the A first I said, because if you take the A out of Addie, you die. But I mean in terms of talking to organizations in the first place, if they're willing to talk to you about it, then that's half the battle, right there. Many times they never even do the analysis phase in terms of designing instruction or designing an intervention or training or anything anyway, because they don't have the time to do it. Or at least they say they don't have the time to do it. And so if they're even talking to you, then the argument goes back to time. It's like, do you want to have knowledge that what you're doing is going to address the problem or not, or you just going to try something that you think might address a problem, and maybe it works, and you're all happy, but many times it doesn't, and then you've wasted X amount of time designing something, implementing something, and evaluating something that is not effective at all. And so the analysis part, even doing a streamlined analysis or a needs assessment, provides you with information that can help save time in the long run, even though you're spending time at the beginning doing it. And so that's usually my argument is, you may think this is going to take a little bit of time, and it is, but it'll save us time in the long run, and it'll potentially save us a lot of time if what we have decided is the solution to a problem actually isn't. Yeah?

**Patrick Healy**

So making the case, this will save you time, this will save you money in the long run,

**Tom Brush**

and resources, yeah, time, people, money, all those kinds of things,

**Patrick Healy**

yeah. Tom, let's say you don't have a lot of time or resources to do the analysis. What's a simple, low cost way people could even begin practicing needs assessment a little bit in their work. Usually,

**Tom Brush**

the time all has to do with data collection. How much data you collect, that's what's really the time consuming part. Usually it doesn't take you a lot of time in order to identify a problem, because usually it's already there in front of you, or you wouldn't even be talking about doing this right, so you've already identified a problem and then doing kind of a thought experiment, or thinking about it, or talking with

other people about whether this is important and necessary in order to proceed. So that usually doesn't take a ton of time, because you can be thinking about that and saying, okay, and kind of reflecting on and maybe reflecting with other people in your organization about how important this problem is, like the example I gave about people getting hurt at the workplace, probably there weren't going to be very many people that were going to be like, Oh, that's not important at all, right. And so then you get to what takes time is a data collection, and that's where I think you can streamline it a bit like I gave you, like we had all these different data sources. Typically, you don't need to do all of those different things in order to be able to get a pretty good sense of what might be the cause of a problem, you can usually look at something and say, What's, as I say, the low hanging fruit, so to speak, that I can pick off the tree that will provide me with enough information in order to start making some conclusions and thinking about solutions so many. Times, the easier things to do depending on what type of problem it is, are talking to people and just having informal or and or formal conversations about what the problem is, and lots of times, that's where I start, because it's not that difficult. People love to talk about if they see it as a problem, they love to tell you about it, right? And so it's not going to be pulling teeth to get some information about it. Now, you want to make sure that you have a few people that you talk to, so you're not just getting one view. But once again, that may not take you that long. Things that take a long time are, oh, we're going to develop a survey and send it out to the organization that takes a ton of time. You know, we're going to do 16 focus groups, you know, we get everybody involved that takes time, you know, talking to people and then, say, looking at documents, say that might be relevant to the problem. Those don't take a ton of time. And so my recommendation would be to start with some of the baseline and simpler ways of gathering information about a problem and then deciding if you need to move forward from there. But typically, and I tell my students this all the time, typically you don't need a ton of data, particularly if it's a very targeted problem within an organization, you don't need a ton of data in order to start making some conclusions about what the cause of the problem might be,

**Patrick Healy**

yeah. So taking a phased approach can be helpful, starting with the low hanging fruit,

**Tom Brush**

yeah, and then see where it goes from there, yeah. Yeah. Tom,

**Patrick Healy**

are there any tools or technologies you recommend to make Needs Assessment easier,

**Tom Brush**

other than common technological tools that we use for everything you know, to format documents and stuff like that, I don't have any specific needs analysis tools. It's more the needs analysis process that you follow and then tools that you could use to help you, and say, analyzing data, whether it be spreadsheets or other tools for analyzing interview data and so on. Lots of times, though, a needs analysis and assessment. Not that I don't consider it research. It's just a different kind of research. And so it typically, the techniques that you use may be similar, but they tend to for a needs assessment or analysis. They tend to be a bit more informal and not quite as rigorous, and I don't mean that in a bad way as what you do for, say, a dissertation or a research report or something like that. And so the tools

that you generally use for data analysis in those kinds of areas tend to be ones that might not be as useful in a needs assessment. So

**Patrick Healy**

it sounds like the framework following the process is the most helpful, and you can use certain tools and technologies to make each stage of the process a little bit easier. What are some of the biggest mistakes or challenges you see people make in conducting needs assessments,

**Tom Brush**

well, like ones that I've mentioned, other than not doing it

**Patrick Healy**

best, mistake number one, skipping it. Yeah,

**Tom Brush**

being biased, so going in with preconceived notions about what the cause of a problem is, rushing through it and spending 10 minutes on a needs assessment without really being at least somewhat rigorous and collecting adequate data in order to get a sense of what the cause of the problem might be, not being open to all the different reasons why a problem might exist. So it's like I go back to that Wiley article that I talk about. So it's a different kind of bias. Like, there's a bias that you have where you go in and you already know what the cause of a problem is, and you're just collecting information to validate your assumption. But then there's the bias that you don't recognize that the cause of a problem can be a variety of different reasons or issues, whether it be people, the organizational structure, equipment, resources, that kind of thing. And you kind of hone in on very specific causes of a problem without looking at it more broadly. And so I think that those two different types of bias probably are the ones that are the most common mistakes that we can make when we're going in and doing a needs assessment. Yeah, yeah.

**Patrick Healy**

Tom, let's say you do a needs assessment and you come to some conclusions and the findings point to something that's either politically sensitive in the organization or maybe performance problems no one wants to admit, in those cases, any words of wisdom for what to do

**Tom Brush**

always back up your conclusions with data, because it's easy to ignore a recommendation of. If the recommender can't really make a strong case for that recommendation, and I tell the students this all the time, you've got to link conclusions to raw data. So you've got to say so here's my conclusion. It's based on what these people said. You know what this document told me, what these observations, told me, and so you can link it back to what information you collected to help you try to understand the problem the other one. And you'd say this in a nice way, once again, you have that linked so you can provide very clear rationale and support for the recommendation you're making. And then also, if they want to ignore those recommendations in a nice way, you can kind of say, well, usually it's you that asked me to do this. You wanted to know why this problem is occurring. And here's what the data says is why this problem occurring, and here's how you can potentially solve the problem. And then, typically

my reaction to that would be, the ball is in your court because these analysis tells a story. What you do with that story is up to the organization to decide what they want to do with. The last one would be, as we talked about before, provide options. Say, Well, here's one way of solving this issue, or addressing this issue. If that's something that is cost prohibitive or something that the organization just isn't ready to do. Then here's another one that may start to address the problem. It may not fully address it, but maybe you start there, and so you give actions. So

**Patrick Healy**

number one, come bearing data to back up your conclusions. Number two, present it as a story in an artful way. And then number three, provide multiple options,

**Tom Brush**

right? And I don't mean that because people that are listening may be like, Yeah, as soon as you provide the easy option, they're just going to take that off ramp and say, Well, we tried, you know, I don't necessarily mean that I think you prioritize them based on what the data tells you is the best solution to a problem, but it doesn't mean that you can't provide other options other than what might be the best option, because, once again, you may be A best option, but it might cost a lot of money, or it might be something that there needs to be some kind of preparation in order to make these organizational changes, or make these personnel changes, or whatever that you're recommending. And so it might be good to have other options to start with, not discounting the one that may be more painful, but whether you can ramp up to the one that might be more not painful, I guess better word is more resource intensive. How's that

**Patrick Healy**

more costly but also more beneficial? Right? Yeah, Tom I want to move on to some questions about you and your experiences learning and performing. But before we do any final words of wisdom for people around incorporating needs assessment into their work, any resources or books, courses, experiences you'd recommend,

**Tom Brush**

feel free to use my if you take the A out of Addie, you die. Students really like that. They thought that was funny. I usually say, if you take the A out of Addie, your design will die or something. Yeah, yeah. So in terms of readings, references, and I can email these to you, yeah, we

**Patrick Healy**

can throw them in the show notes. Definitely, you mentioned maker and pipe already, yep.

**Tom Brush**

So there's Yeah, maker and pipe analyzing performance problems. The text that I have that's pretty good is a book by sleazer russaft and Gupta, a practical guide to needs assessment. That's about 10 years old, but it's still pretty good. And these are some really well known people in the field. Arlene Russ aft is an Oregon Gupta is an IST graduate, though there, and I actually met her. She gave me a copy of the book. Nice. So those are two good ones, the wild. Why doers do I'm sure you can Google that. Yeah, yeah.

**Patrick Healy**

We can throw them all in the show notes, yeah, yeah, yeah. Sounds good. Sounds good. I'll just throw a plug in for Kathy Moore, she's a book called Action mapping. She's a practitioner, but she does a really good job. She addresses the book to L and D people, especially instructional designers, around starting with the problem and designing from there, kind of mapping back. She calls it action mapping. I'll throw that in the show notes for people too. Tom, let's talk about you now and your experiences learning and performing. So my first question, can you tell me about a time when you performed what you consider to be your best? What was the situation? What were you trying to do, and what was the result?

**Tom Brush**

I'd say probably the best performance, or my best project that I've worked on, is. Is one in which we were working on designing tools to help teachers within career based learning in their classroom. And so we were able to, through the years, acquire funding through a variety of sources in order to research both how to prepare students to be able to engage in inquiry in the classroom in different subject areas. We looked at social studies, and we looked at science, computer science, different ones, and then what resources might the students need in order to really effectively learn through inquiry? And then from there we went into Okay, now we looked at that. How do we help teachers be able to do this? And sadly, that's probably my most rewarding work, is working with teachers in helping them engage in inquiry with their students, or develop inquiry based activities, like I said, in variety of different content areas. This is basically at the middle school, high school level, because that was my background as a high school math teacher. So I've done a lot of work in middle school and high school. And when I think about that and why I performed well, I think there's several reasons. One is I had great collaborators. That's probably the most important is it's very little of what I've done in my career I've done by myself, because it's not that much fun to do by yourself. Honestly, just sit there and do stuff, you know? And so having great collaborators is important. And then the other reason why is because I had a passion, and I thought I was making a difference. So I've been a teacher. I've been an educator. I said I was a technology director, and I got my degree in special education, and the thing that always drove me was trying to engage kids that weren't that interested in being engaged. And how do you go about doing that? And so I think that those kinds of things, and wanting to make a difference, seeing an issue that you really want to try to address, that's not an easy issue to address, and having great people to work with, those are things that help you perform your best.

**Patrick Healy**

Yeah, so it sounds like having a worthy challenge, a group of collaborators to partner with and doing something meaningful to you, helped you perform at your best. I love that. Yeah. What about the flip side? Can you tell me about a time where you just completely failed, however you define failure, what happened? But also, what did you

**Tom Brush**

learn from it? Well, there's lots of times that I've completely failed. I mean, I've been an administrator, like, I've been a department chair, I've been an Associate Dean, and I said I was a technology director. I never really considered myself to be the greatest administrator. One of the reasons why is because I

didn't really like it that much. I'd rather like just work on fun stuff and but, yeah, there was a need to at the different times I was in mystery, there was a need. And so I had multiple situations in those areas, as well as in my own research, where I would consider it something that didn't go very well. And if you look at the common themes about that, it tended to be, I was sloppy, I rushed through things. I didn't think this is one thing. I laugh at myself because, like, I watch Jeopardy once in a while, and again, it frustrates me, because they'll ask a question, and I kind of know the answer, but I have to think about it in order to remember the answer. And by then, you know, the buzzer is gone and it's over and they're on. So for me, what I know about myself is I have to process, I have to think, and sometimes that takes time. And so when I don't do well, typically it's when I haven't thought something through and when I haven't looked at different alternatives and possibilities. And that's where collaboration comes in, and where engaging with others. As you might guess, I'm very much a social constructivist in terms of my thinking, engaging with others and processing things through interaction with others, to me, is very important. So when I haven't done well, it's usually when I've done stuff in isolation, when I've just done stuff to get something done, and then usually have to do it again, or when I've made decisions without gaining input from other sources, and that's good to know in terms of good research too. But I say those are some words of wisdom, yeah, when

### **Patrick Healy**

you weren't particularly passionate about the tasks, when you were doing it by yourself, when you rushed and just when you didn't have time to process and really think through what you were doing. Yeah, Tom, what routines or habits do you have in place yourself to help you either learn well or. Perform Well, do stuff in the morning,

### **Tom Brush**

I mean, and that's just me, I perform best in terms of thinking, writing, project, work, those kind of things in the morning as opposed to the afternoon. So I usually save the afternoon for things that are more mundane and routine, whether it be doing a report or something like that, where I can do it, but it doesn't necessarily require new thinking or synthesis or things like that. And so that part of me, and I think everybody's different than some people are better at night than in the morning. But maybe

### **Patrick Healy**

I'm one of those. I'm what? I'm one of those people. Yeah, I'm not a morning person at all. But what I hear you saying is know yourself and kind of manage your energy, yeah, and

### **Tom Brush**

that's what I was going to say. Like everybody probably has an intuitive sense of when they do their best, and so use that to your advantage. And once again, be thoughtful. It's okay to step away from something and then come back so that you look at it again. Make sure that you engage with others, particular people that you are pretty sure are smart and know stuff. Try to be as unbiased as possible, particularly when you're doing any kind of this type of work, which, like I say, I consider it all to be under the umbrella of research. The worst researchers are ones that already know the answers to everything.

### **Patrick Healy**

Yeah, begin with that open mind and needs assessment and in research. Yeah, yeah. Tom, why do you do what you do? What motivates your learning and performance? I think if

**Tom Brush**

you find the job that's not really a job, then you've found what you really want to do. And so I think there's a way of saying that, but you never work a day in your life, blah, blah, blah. And I've always been interested in helping people perform better. And that seems very robotic, I guess, but more like help people learn. And I've always been curious about, once again, as I said, about particularly kids. And I always thought that the number one challenge to good teaching is keeping them engaged, keeping students engaged, because if you can engage them, then it's half the battle to be able to get them to understand what you're trying to get them to learn. If they're not engaged, you've lost it, right? And so for me, that's one of the things that keeps me going is, is I've seen some of the work that I've done with colleagues, and it really has addressed that, and we've had positive results, particularly in terms of student engagement and things like that, and so that kind of keeps the passion going in terms of seeing some success about what you're trying to do, having a goal that you think is helping people and not just helping yourself, and then Seeing that goal at some level, be fulfilled that you really do see that you're kind of making a difference, even if it's in a small way of helping people. And so you can help people in lots of different ways. It's just that I've chosen to do that as part of my job. It

**Patrick Healy**

sounds like helping others in terms of education, in terms of performing better in life is why you do what you do. Yeah, Tom, do you have time for just a few rapid fire questions? These are just short little questions, top of the head responses, sure, if you didn't do what you do now, what would you be doing and why? I'd probably

**Tom Brush**

just be tangentially, I'd probably just still be a high school math teacher. I like doing that, but I was very curious about research and so on. And so you don't really have a lot of opportunities if you're just a just and I don't mean that negatively, but if you're a high school math teacher, that's your job kind of thing, and you don't have as much opportunity or time to do some of the things you get to do as a professor,

**Patrick Healy**

yeah, as a math teacher, I can see you being a good math teacher. Maybe some of your past students would say otherwise, but I imagine you would be quite engaging. Yeah,

**Tom Brush**

I think my past students, because I taught quite a while ago, I think my past students are like 50 now or 40.

**Patrick Healy**

Yeah. If you have any listeners in the audience who were Tom's past students, feel free to comment on the episode. Let me know. Yeah, Tom, if you had to get a tattoo of a short phrase or quote to remind yourself of something, what would it

**Tom Brush**

be? And this is something that I that I'm thinking about now as I've gotten older, something like, love your job, but don't make your job your life. Where like my job? You know, I'm a professor. You know, I'm blessed to be a professor. Think it's the greatest job in the world, if that's what you want to do. But also. So I think that you have to be engaged in other things, and not just your job. Otherwise, that's all you become. And then you never want to be done or leave. And I think that there's other things in life that you can do beyond your job. So it's okay to get to a point where you say, Oh, I think I'm going to move on to other things,

**Patrick Healy**

yeah, maybe something like, love your job and lived your life, yes,

**Tom Brush**

and live your life, right? Yeah? Because if you don't, then you're 80 years old and you're still this is it, or you decide to retire say, and you're like, what am I gonna do? I hear my friends say that, and I'm like, Are you kidding? Yeah. I mean, what are you gonna do? It's like, there's all kinds of things.

**Patrick Healy**

Yeah. Well, I think people, you know, when they retire, they struggle, because a lot of people do tie their identities to their jobs. Yeah. Tom on the flip side, if you could take out some real estate on a billboard on the side of the highway to communicate a message to the whole world, what would you put on the Billboard?

**Tom Brush**

In some way, I'd say there's a big difference between an opinion and effect, meaning that I see this, and I see this happening now a lot, and I tell my students to be aware of this and to try not to fall in this trap. You know, if you don't have unbiased data to support something, then it's an opinion, right? And hey, if you want to have an opinion, that's great, but don't assume or don't project your opinion as fact when it's not. It all goes to being good consumers of information. And I see this as a real issue that we have, and it goes back to my whole idea about how inquiry is important and being thoughtful in terms of learning how to engage in inquiry is important. So that's kind of what I put something like that. I might have to think about the best way to put it, but that's what I'd put on a billboard that no one will probably listen to. Yeah,

**Patrick Healy**

there's a difference between facts and opinions. Yeah, for listeners who don't know about inquiry based learning, we can throw some resources in the show notes for it

**Tom Brush**

too. You can Google me. There's all kinds of stuff, okay, yeah, what's

**Patrick Healy**

something you're currently worried about?

**Tom Brush**

It goes back to the billboard. I think the thing that worries me is, for some reason, it seems like we've come to this state of affairs where being smart and being educated is not as valued as it used to be, and having knowledge and wanting to share that knowledge and use that knowledge to do good things is not as valued as it used to be, that worries me quite a bit, because I think that the way we advance as a society is through learning and through being inquisitive and thinking and being able to share and see things through multiple perspectives. And so that really worries me, that I think that we're somehow, and I don't know how this has happened, we're getting to a point where it seems like everything's an opinion. Now, even when it isn't, you know, even when you base something based on research, somebody just comes in and says, Well, that's your opinion. You know, it's like, Who would have thought? We're still having to argue about whether the earth is freaking flat. Come on, yeah. So,

**Patrick Healy**

yeah, it needs assessment. And in life, in personal life, social life, political life, etc. Have that open mind. Don't come in with thinking you know the answer, because if you think you know the answer, you're not going to learn

**Tom Brush**

right. Exactly.

**Patrick Healy**

On a more cheerful note, what's something you're currently excited about? Well, let's

**Tom Brush**

see. I'm excited that I'm kind of getting close to the end of my career, and I can reflect on that, and think about a lot of great things about it. And I'm not, as I've kind of said a little bit earlier, I look forward to the next phase of what I'm going to do, but I also am excited that terms of thinking about, you know, the students that I'm hopefully have impacted, and the work that I've done that I think has made a difference. And moving forward in terms of what I might do in the future, that may have nothing to do with what I do as a professor, but I still think can be worthwhile and valuable.

**Patrick Healy**

Yeah, and that leads into my next question, what's your next project? Or maybe I should ask, what's your next chapter?

**Tom Brush**

Well, in the short term, we're still working on a project involving, kind of looking at the best ways to teach computer science and AI to kids, whether it be elementary, middle school, high school, and that's kind of fun, because I'm looking at different. Ways to implement, say, inquiry, say, in those content areas, which I hadn't thought of before. The challenge to that, and the part that worries me a little bit is that I'm not really an expert. I don't have a ton of expertise in AI. I don't have a ton of expertise in computer science. I know a little bit about it, but that's a danger, because if you know a little bit, then don't assume that you know a lot, right? The Dunning Kruger effect. So that's exciting in terms of trying

to look at inquiry and then kind of shifting different content areas, and what does inquiry look like in a different content? Yeah, so that's in the short

**Patrick Healy**

term, yeah, no, that sounds interesting. That's why it's important to collaborate with people who do know, yes,

**Tom Brush**

absolutely, yeah. I mean, a lot of the work I did in inquiry, particularly on is in social studies in history. And I was a math teacher, right? But I had some great collaborators that were social studies in history, and we worked together for many, many years, and did great, I think, great things in a content area that I was not an expert in.

**Patrick Healy**

Yeah. Tom, this has been a fun conversation. My last question, can you just plug yourself? I call this the plug zone, where can people find you or go to learn more about you, or needs assessment, or anything.

**Tom Brush**

If you want to learn more about me, just either can use Google Scholar or Google and just Thomas brush, the one at Indiana University. There's a time it's funny, there's a Thomas brush who's a professor at Purdue. Oh, really. Wow. He's in business so and I don't think we're I mean, maybe way back we were related, but I don't think we're late. I've never met him, but I always wanted for always want, okay,

**Patrick Healy**

hey, that's so funny, because I you Purdue is a big rivalry, right? Yeah, that's

**Tom Brush**

pretty funny. Yeah, I have a profile on the IU website. If you just go, you'll get to my profile. I think you already saw it, and that usually has my Vita connected to it and stuff like that. So you can look at that, or you can always, if you have questions, just email me at T brush@iu.edu, and I'm happy to answer any questions there. Too

**Patrick Healy**

Cool, yeah, and we'll throw all the links and the mentions in the show notes. Yeah, great. Well, Tom brush, thanks for coming on the learning a performance podcast. My pleasure. Have a great day. Yeah, you, too. You Yeah. Man, what a good conversation about needs assessment with Dr Tom brush. I love my chats with Dr B. Among the many skills Tom has, I think one of his real strengths is his ability to make seemingly dry and abstract topics like needs assessment, interesting and practical. Tom's always got a good story or two up his sleeve as well, and his laugh truly is infectious. Dr B shared a lot of insights in that one. But here are three nuggets of wisdom that really stood out to me, along with three challenges for you to apply these nuggets in your work. First, when it comes to needs assessment, go in with an open mind, as Tom and I discussed, if you enter a situation with a predetermined idea of what the problem is or what's causing it, you're much more likely to gather bias data that simply confirms your assumptions. If you're a teacher and you go in to assess a student you've been told has issues,

you're more likely to notice those issues, even when they don't exist. If you go into a department or an organization having been told by the leader that there are people need training to perform better, you're more likely to overlook the workplace factors that may be the real contributors. Making assumptions. Of course, can be helpful. It can save time, but it can also result in you missing the real problems and causes and finding the solutions that actually work to address them. So my challenge to you, my first challenge is to notice the next time you catch yourself jumping to conclusions, it might be assuming that what a stakeholder is telling you is the problem, it might be jumping to solutions. I challenge you to pause to consider other possibilities before you collect a single piece of data second, have a process good Needs Assessment doesn't have to be overly complex, but it should follow a clear set of steps, from identifying the problem, engaging its importance, to gathering data from multiple sources and then analyzing and prioritizing possible causes, a consistent process not only produces more reliable results, but it also makes The recommendations you come up with easier to defend. So my second challenge is to pick one process or framework you like for needs analysis, it might be the one Tom discussed, or might be another, and commit to following it fully on your next project. As the saying goes, we don't rise to a level of our expectations. We fall to a level of our city. Systems. Having even a basic process for needs assessment helps to ensure you don't become overwhelmed by data, cut corners, or be pressured by leaders to jump straight to that solution. And last but not least, when it comes to needs assessment, let the data be your guide. It's so easy to get swayed by opinions, politics or the loudest voices in the room, but data, whether from interviews, observations, surveys, documents or really just talking to people, gives you a credible foundation for your conclusions and recommendations. It's the data that helps you make the case for change and stick to your findings even when they're sensitive or uncomfortable. So my third challenge to you your next project, try to ensure that every recommendation you make or solution you suggest can be directly traced back to concrete evidence from your assessment. That's it for this one. I hope you got a lot out of exploring needs assessment with Tom brush. You can learn more about Tom's work through his Indiana University profile or by looking up some of his publications, and I link those in the show notes. That's it for this one. I'm your host, Pat Healy, and I'll see you next time for another episode. Okay? Learners over to you. What's one thing that you took away from this episode? Take a moment to make a mental note of one big idea, strategy or tool that you think could really enhance your learning and performance. Think about how you might apply it in your life in the next few days, then give it a try and see what difference it makes. Last but not least, feel free to share your experience on the webpage for this episode. Remember, improvement equals reflection plus action. What are you going to do now after listening to this episode, if you enjoyed this episode, I've got three requests for you. First, if you'd like to receive future episodes, make sure to hit the subscribe button on your favorite podcast app so you'll never miss an episode. Subscribing also helps the podcast reach a wider audience and helps me continue to produce high quality content for the Learning and Performance community. I'd also be grateful if you could take a few minutes to leave a review on your favorite podcast platform. Reviews help the podcast reach a wider audience and attract more listeners who can benefit from this content, plus your feedback helps me improve the show and make it even better for you. So if you have a moment, please leave a review and let me know what you think. Last but not least, if you really like the show, I'd appreciate it if you could share the podcast with friends or colleagues, directly or via social media. When you do, make sure to share one thing you learned with them. Remember, when you teach something, it's like you're learning it twice. One more thing, if you're looking to elevate your learning and performance, I'm here to help. My company, PJH, learning and performance offers a range of services, including learning, experience,

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