Translating Workforce Problems into Training Solutions

What are your organization's needs? Is training the solution? In this episode we discuss assessing your organization's needs and how to use our center's approach to problem-solving to translate your training needs into evidence-based solutions to enhance your workforce.

Fara Allen: Welcome to CETE Works, a podcast produced by the Curriculum and Training Team at the Center on Education and Training for Employment—a translational research center on Ohio State's campus. We work where research meets reality. I'm your host, Fara Allen, a Program Coordinator at the Center. This series of podcasts focuses on workforce development and will feature discussions about preparing an organization for implementation or modification of a training program. To learn more about our work, you can visit our website CETE, that's C-E-T-E, dot O-S-U dot E-D-U.

Fara Allen: Today, you'll be listening to a conversation between Traci Lepicki, the Associate Director of Operations & Strategic Initiatives and the Program Director for the Curriculum and Training program at the Center with her colleague, Dr. David Julian, a Translational Research Scientist, and the Program Director of Evaluation & Community Practice at the Center. Here they discuss assessing an organization's needs and problem-solving processes and how it's essential in planning a professional development program.

Traci Lepicki: Hi Dave, I'm excited to talk about your work at the center and its importance in professional development planning. Can you give some insight about translational research and its components?

Dave Julian: We've spent some considerable time reviewing this literature really trying to understand how folks are describing translational research and have adapted a number of those definitions and accepted procedures in the field. So, for CETE, the focus in the translational research mission is really on moving innovation and interventions that solve problems into routine use. So, in our work with various sponsors of projects we're trying to understand the problems that they present and then through accessing innovation trying to design and implement an intervention that that solves that problem. So, in our approach in CETE's approach, there are really three different components that there is a knowledge generation component. Because lots of times new knowledge or new understandings or new insights come out of this work.

Dave Julian: So that's the first component. There's a second component, which really focuses on efficient and effective implementation of an intervention and in translational research that's often referred to as translation. And then there's a third component which is once we understand that something works the effort to use that in other settings seats work has really focused mostly on the effort to an effort to translate or implement evidence-based practices that address the problems that sponsors bring to our, our various teams, we've sort of taken to referring to that process as or the process of translation as formal effort to solve problems.

Dave Julian: Our problem-solving process has a number of different steps that are formalized in the literature, we probably approach them in a much more informal way. So that process really focuses on problem definition really understanding the values or the requirements relative to a specific project. Out of that there's an opportunity to generate potential solutions and then to select a specific approach to solving a problem based on specific values. And then at the end of that process, some effort to evaluate or understand the extent to which we've been successful. And in the best case this is an iterative process so that you can over time, build on lessons learned and ultimately create an approach to a specific problem that has some utility across, or even across different settings.

Traci Lepicki: I appreciate that level of detail, it helps our listeners to understand the foundation of translational research. You mentioned approaches to specific problems, what is the first step in looking at problem-solving within an organization?

Dave Julian: So, if we think about problem-solving as a process which I believe it is particularly in an organizational context. The initial step is to really think about what problem we're trying to solve. And I would argue that very often we give little attention to that focus, or we may not address that with sufficient detail.

Traci Lepicki: Is it in your experience that when you are working with a group for the first time, an organization for the first time, or maybe even not just the first time. That they come to you having a pretty solid understanding of what their problem is or what they think their problem is and then and then what does that look like. Is that accurate? Is there some other information you need to kind of tease out?

Dave Julian: So, I would say as a general rule when I've been involved in working with potential partners or organizations, there is often a sort of predefinition of what we should do prior to try and understand what the problem is. Sometimes that what we should do comes out of a pretty solid problem definition, but sometimes not. And I would even argue that I've been involved in projects where we've gotten to the end of the project, and we have solved the problem. But it probably was not the most appropriate problem to be addressing given the client's needs. Now that never been as dramatic as I'm making it sound, but I think we do ourselves a disservice if we don't spend some time up front really clarifying what the problem is, without any reference at all to what we should do.

Traci Lepicki: And not jumping to the solution to quickly.

Dave Julian: Exactly

Traci Lepicki: And spending time thinking about what the problem at hand is or maybe what the problems that contribute to it. I'm wondering, like, it could be the case that there's a series of things that sort of relate to each other. So, not one of those is what's going to get to the end, but sort of unpacking multiple things, that correct?

Dave Julian: Yeah, I think that's a really useful way to think about it. And in fact, the tool that we use to sort of understand all of this is something called a logic model that probably many people in our audience are familiar with, but we found that that is a foundational tool and that we can begin to understand issues it then sort of makes sense. If this happens, then this happens, then this happens and you can apply that concept to any problem so you could start with a specific issue, you can begin to break that down into more precise problems.

Dave Julian: In fact, another tool is again, many people might be familiar with this is called the five whys exercise. So, you know, we might start with a problem and ask the question why is this important and really try to begin to focus more specifically on what is it that we're trying to address. Then, of course, that is directly related to the to the idea of defining an outcome. So, if our problem produces a strategy or an action that results in an outcome that solves the problem where we're in really good shape. If that's not the case, then we need to spend more time sort of thinking about what it is we are trying to address from a problem perspective, what actions we're choosing to take and what outcomes we're trying to produce.

Dave Julian: So, in the problem-solving sense all of those components are connected. And I think are really important at the very beginning of a project in terms of getting everyone on the same page.
And, in fact, if you look at the project management literature, this is a basic sort of foundational tool. Again, another tool, this idea of creating a charter or creating project specifications.

Dave Julian: And then the project management languages work breakdown structure which I would argue is pretty similar to the idea of a logic model, sort of a coherent process that moves from problem definition to solution generation to implementation and ultimately evaluation.

Traci Lepicki: As you're describing this, I'm imagining a pretty solid linkage between each of the components that you just described. And I want to circle back quickly to, you mentioned the five whys. So is that the idea of asking the why question and then you get the answer. And then you ask why about that. And then you get the answer and why about that. Is that correct or could you explain that in a little bit more detail?

Dave Julian: That's exactly the idea that through this process of asking the why question, we begin to get more and more clarity around what it is we're or why we're choosing to engage in a specific activity, and I mean you can think of, you know, the projects that CETE has been involved in historically and sort of apply that idea to strategy selection. I think it's really useful in that space between problem definition and strategy, strategy selection, and then ultimately, as we connect those what we're, what we're doing is we're creating some assumptions about how a program, or an action or intervention is designed to work. So, if we assume x, we assume this problem and we choose to engage in this strategy, we're making an assumption that this strategy will provide some resolution to a specific problem. And part of the problem-solving process has to make that explicit in to how we engage in the work. It is an assumption. Right. We don't really know whether a particular strategy will resolve a problem until we put that strategy in place and then measure the outcome. So essentially what we're doing in this process is testing assumptions, which is when the evaluation component comes into play.

Traci Lepicki: So, Dave, to expand on that - our team at the center focuses heavily on training, so we really understand that it’s an integral part of an organization, whether it’s done in a meaningful way or done poorly. Can you give an example of a problem statement that is addressed by training?

Dave Julian: I can, in fact, the team that I work with the community engagement and evaluation team is developing a project right now and we're in that conversation around what problem we're trying to address and up the problem statement, you know, the flip side of that coin is the outcome that you're trying to achieve. So, in this particular case, we've had several conversations with the project sponsor and the outcome has been expressed in a number of different ways. And in fact, it's probably fair to think about this particular effort in terms of multiple outcomes, but the sponsor, in this case, wants to increase linkages between schools and community resources. So, one outcome is schools would have access to resources in the community that could help their students learn. A second outcome is Enhancing access to those resources once they're identified and have developed a third outcome is increasing. engagement between and in terms of or increasing Family engagement and their student's educations. And then finally, the idea is if some of these other outcomes are achieved that ultimately would produce benefit for youth and families so you can easily turn those outcome statements into a problem statement that again, our job is to design an intervention that results in the achievement of specific outcomes. In this particular case there are specific individuals that are charging non-CETE employees, in fact school district level employees who are who are charged with producing these outcomes.

Dave Julian: In this particular case, our job is to develop or create a training program that would allow those district level or educational service center level employees to work with school districts to produce these outcomes. So, in this particular case, we could think of the problem statement something along the lines of what professional development is necessary to facilitate the process that a school would go through to identify needs and assets around family engagement to identify potential community partners to develop meaningful collaboration with those community partners, and ultimately to create a process that would permit the achievement of those outcomes. So that's a fairly long-winded problem statement and it clearly needs some more work, but the value and putting it into this form is we know lots of things about what this project is going to look like.

Dave Julian: As a result of going through this process, we know it's our responsibility to provide that professional development or training. And we can actually understand the content of that professional development based on some of the specifics around what these specific individuals at the educational service center or district level will need to do. So that's one example in virtually every project that we're involved in at this particular point in time, we're framing in terms of a problem statement.

Dave Julian: It's sometimes it's fairly informal and part of the negotiation with the sponsor is to get agreement on what that problem statement is which then puts everybody in a position of understanding whether the proposed, in this case, professional development will be sufficient to achieve the outcomes that we're interested in. So that's one example, again could probably come up with some others if we if we put our minds to it.

Traci Lepicki: So, with those linkages, it sort of sounds linear, but what you just described to me does not sound linear, that it's iterative that there's a looping back in a sort of both examining did this work the way we thought it would. And if the answer is no, a looping back and trying another strategy. Correct?

Dave Julian: It's, I mean, that's a great question because that's what I've just described as sort of a problem-solving model and with all models, it's a representation of reality and it is represented in a linear way we do this. And we do this, then we do this.

Dave Julian: But in reality, it's more of a process with feedback loops built in. If we're fortunate enough to be involved in a multi-year project, we may have some opportunity to test assumptions, if they've worked. That's all well and good, that sort of implies that we continue to operate as sort of originally planned. On the other hand, if we discover that we've addressed the problem partially or perhaps not even addressed the problem, then we have the opportunity to engage in what we call project improvement planning, which is an opportunity to just sit down and understand how things are working and improve our response to a problem moving forward and , again, you know, the we're drawing on quality assurance and continuous quality improvement practices when we do that, and we would certainly strongly recommend that projects be characterized that way if we're engaged in a project that has a limited time frame we may not have the opportunity to do that. The default is typically asking those kinds of questions on at least an annual basis. Sometimes we have an opportunity to ask those questions on a quarterly basis or perhaps even a monthly basis, although that's in my experiences relatively rare folks usually are comfortable asking those kinds of questions. The default is typically at annually.

Traci Lepicki: So, let me ask a question, relative to that, about doing that examination or that evaluation piece too soon. You mentioned sort of a cycle for reviewing but is there a cycle for running through the program and that needs to be sort of defined so that you don't prematurely, try to examine whether it has worked or not, it hasn’t maybe had a chance to work. So, could you talk about that a little bit?

Dave Julian: Yeah. Again, that's just a fantastic question. Another concept that we use in this work we refer to as a program improvement cycle, which refers to exactly what you're talking about. And, that occurs, again in my experience, prematurely, so the idea of a program improvement cycle is that we're very specific in terms of what time is necessary. What months or weeks or days are necessary in order to complete a full cycle of the program? Because, again, the one of the concepts and program logic is that we've got to deliver a program in its entirety before we produce an outcome. So, the program improvement cycle really reflects what time is necessary in order to fully deliver a program and it also reflects the time necessary for an outcome to actually be produced. So, as we think about sort of outcomes, those outcomes really have to, so for example, if we were thinking about a program improvement cycle of 12 months, you know, the question becomes is 12 months efficient to deliver the program and is 12 months sufficient to produce a volume of outcome that is that we're able to measure and make some judgments about outcome achievement and so forth. That's a critical question in this work. And one question that I find that we often neglect.

Traci Lepicki: So, for my context, thinking about training programs and professional development systems, there needs to be enough time for the person participating in that program to truly participate in that program before we can come in and see how well they're doing in the program or how well the program itself is doing overall. Could you talk a little bit, you said outcomes, and sometimes I hear the word output, and we also have the word outcome. Could you talk a little bit about the difference between those two ideas?

Dave Julian: Absolutely. Both of those ideas are important. Output is typically the volume of service delivered. So, we could define output as we delivered 16 hours of course work or our participants attended three classes. Or participants were exposed to 20 hours of instruction that tells us how much service they receive. But it doesn't really tell us what outcome or what benefit was derived out of, for example, participation and 20 hours of instruction. I mean, you would assume again, important concept, but you would assume that by virtue of participating in 20 hours of instruction, I've learned some new knowledge.

Dave Julian: So, measuring the extent to which new knowledge was learned is an outcome measure. While measuring the number of hours of instruction to which a participant was exposed is an output measure outputs. By the way, can be terminal measurements in the sense that as a program provider. I'm responsible for 20 hours of instruction. But generally, we encourage where resources permit trying to go the next level in terms of really understanding whether that instruction resulted in that learning. And, of course, that then would if we thought about that in terms of problem definition that suggests that in this particular example from somebody's point of view.

Dave Julian: Inadequate knowledge is a problem. So again, we want to we want to in the early stages of a project, we want to connect all these different components and understand where they make logical sense in terms of what a partner or clients trying to achieve.

Traci Lepicki: When you talk about partners and clients and participants, has me thinking about all the different stakeholder groups that might engage in this process. And it also has me thinking about buy in and it sounds like the process is valuable to get people on the same page. So, I'm curious what your thoughts are about using this process as a tool to both engage stakeholders. So, some information from me, relative to who needs to be at the table. And then, and then also sort of talking about what the value of buy in is, what does buy and look like what's. How does that concept connect in this conversation?

Dave Julian: Again, I think, a really important question and what this approach to problem-solving. It is a specific approach to problem-solving and I think it's one thing that the Center for Education and Training for Employment offers to partners and clients that I wouldn't say is not available in other contexts, but it is a tried-and-true problem-solving approach that I think we offer to our clients, customers, partners, but it does imply that customer is committed to engagement in that process. And so, as we begin to develop a project, there's a project development phase where we're often going through the steps even prior to a contractual arrangement we're working with a with a partner. So, we've got to be able to communicate clearly what's involved in that process. We've got to be able to conduct that process in a way that doesn't take weeks and weeks and weeks. And inevitably, some of that occurs in the project development phase, but it almost goes without saying that we're doing some of that post Project Development, which is not a bad thing because it's sort of a it enhances, I believe that the problem-solving process. So, the buy in, I think what's really important is that folks understand the process are prepared to sort of tolerate the process because there's a lot of process steps. And what I'm describing and then are committed and bought into that activity. Another concept that we sort of employ that we've borrowed from Six Sigma is this idea of a process owner. So, there's someone positioned who has some power to commit to the process to because we most often, as a CETE representative, my role very often as is facilitating that process. The process owner role is a different role that's usually a representative of the customer or the client who has the power or the authority to commit to the process and sort of work through the process. So, a lot of tools that we can use in this context. It's probably fair to say that in many instances we're, sort of pulling tools out as needed. Occasionally we have the opportunity to do a process from start to finish, problem-solving process from start to finish.

Traci Lepicki: In talking about these processes, I'm wondering if the approach varies among public and private sectors. Are the needs different and how are they analyzed?

Dave Julian: So, in the public sector, I think this is a fairly common approach to to problem-solving that problem that that process that I described previously is often referred to as the rational problem-solving model or approach, it's taught in planning schools, it's taught in public administration programs. Taught in in any curriculum where there is an effort to understand specific issues and then generate solutions and so forth. The reverence to strategic planning in the public sector has become fairly prominent these days, in my opinion, strategic planning is just a variation on the three on the same there are additional tools that we can sort of bring to bear. Through this strategic planning process things like A SWOT analysis to report environmental mental scan that sort of thing. And you know the reference the SWOT analysis is really trying to understand strengths, weaknesses, opportunities and threats relative to any specific problem that we're trying to address. So, I think, a very common approach in the public sector. I also think it's a pretty common approach in and in the private sector. And I think, you know, various businesses use similar approaches relative to understanding the needs of consumers and developing products and trying to whether understand whether those products. Satisfy specific needs. In the, in the business sector. Now again, this is I'm not terribly familiar with these concepts, but I have a little bit of understanding of different approaches. The Plan, Do, Study, Act approach is essentially a variation on the rational planning approach and that really is a is It. I think fairly common, common approach to problem-solving. And where folks really trying to understand the problem. There, there are some efforts to implement a solution, perhaps on a limited basis. Studying that in trying to understand whether it satisfies or solves a specific problem. And if that's the case actually been at beginning to Implement that as a formal problem-solving effort and I saw one reference actually in the business literature that described the Plan, Do, Study, Act approach as applying scientific method to action. I really like that. That way of thinking about Problem-solving the, the, in the last decade, the there's a, a, an approach in business referred to as six sigma when people can become trained at various levels of competency, and I think six sigma is an approach to problem-solving that incorporates a lot of the tools and a lot of the ways that we think about Translational Research. In fact, I have in my mind an almost one to one correspondence in terms of that approach and or in terms of the Six Sigma approach and translational research and lots of tools in the private sector toolbox. Some of them I have some knowledge of but many of them are concepts that I'm still trying to learn about. There's a reference to a three thinking and there's something called an X matrix that allows folks to sort of align aspirations and strategies and tactics, which is, you know, we have similar tools in that in the translational research toolbox. They just have different names. So again, I think a lot of overlap between how folks in the public sector apply these tools and how folks in the private sector apply these tools. And again, I'm a very strong advocate of this approach to problem-solving and project development it I just believe it works and works very efficiently actually.

Traci Lepicki: For the process owner role that you described what I hear you saying that is that that person is both are the champion. For the initiative itself or the project itself, potentially, but then also might be in a decision making capacity, such that, you know, not everything can happen by committee, right, that you have multiple voices around the table, having the conversation sort of helping to define or break out what all the components are but at times, there needs to be one individual who then makes a decision about what's next, or which of those interventions is going to be tried first or what outcome is the most relevant to attempt to measure first versus what might be something later on. Is that correct, from your perspective?

Dave Julian: Again, really important question in a traditional sense that idea of process owner is usually a person senior level manager, who is has the responsibility for a specific process. So, for instance, in a, in a manufacturing context, it might be the manager who's responsible for some aspect of the product production process. What we find is we've borrowed that concept and it works a little differently with respect to the public sector or the nonprofit sector, it's more of a that the person that we often to in sometimes we are explicit about identifying a process owner. Sometimes we mentioned the concept and sort of encourage the appropriate person to take on that role, but it's not nearly as definitive in the work that we do. And it can oftentimes be multiple folks, and this raises a really, I think, important question in the sense that a lot of the work in which CETE associates are engaged are community based organizational based projects where the stakeholder or where a group of folks, for instance, community representatives, they're experiences is critically important. So, asking questions around how you engage that experience in the problem-solving processes is very, very important and there are models and approaches to doing that, but frankly, they're challenging. And again, I believe personally often neglected and or often not used to their fullest. Potential and in in in a lot of the work in which were involved a really important issue.

Traci Lepicki: So, Dave, we've touched on. The program logic. The what are the needs that drive at the beginning. Why does the partner or the client engage with us? What's the problem that they bring to the table, how you kind of start to get at the layers underneath that, by asking the questions. The whys the five whys as you described, and then continuing to move through the process to determine what strategy is going to be implemented what intervention is going to be put into place and then looking at what the results are going to be. What are we going to count? What are we going to look at from a process improvement perspective, what are we going to identifies the outcomes and evaluate so that feels to me like that's the full the full cycle? And we've touched on some of the roles and responsibilities that folks have as they're engaging as in this work. Is there anything else about problem-solving that you want to touch on?

Dave Julian: I think the final component that I would add is it or that we might want to consider is sort of managing that process. And again, I think this is a this is something that That seat brings to the equation that is at least somewhat unique and in the sense that seed associates are trained to facilitate this process. And we haven't talked specifically about how that relates to translational research, but I also think it's in my estimation is a definition of sort of the translation part of translational research. It's how you get evidence-based practices implemented in settings where they can produce outcomes that that that benefit. People in in communities, schools, and other organizations. So, you know, I've been personally involved in this work for many decades at this point there's a learning curve in terms of understanding these tools and understanding how to utilize these tools. But again, I would argue that an experience and talented facilitator who moves through this problem-solving model with a client or customer enhances the chances of implementing a strategy that actually solves a problem or addresses an issue that's important to the customer. So again, I'm very biased in my opinions because of just my observations over the years that have suggested that this approach is an efficient way to think about the work that an organization like the center does.

Traci Lepicki: Thanks, Dave. I appreciate all the information that you shared with us today.

Dave Julian: Thank you.

Fara Allen: Thank you for listening to this episode Problem Solving Processes with our guests Traci Lepicki and Dr. Dave Julian. We hope you enjoyed it and will share with your friends. If you'd like more information on this topic, you can contact us at go.osu.edu\OhioState4Work. See our description for details. Be well and bye for now.