

Hope: Hello and Welcome! I'm Hope Cotner with the Center for Occupational Research and Development. We're so glad you could join us today for the Necessary Skills Now Networks Community of Practice Webinar, Engaging Technician Faculty and Teaching Employability Skills. The NSN Network is a National Science Foundation Coordination Network facilitating collaboration between educators and employers to improve the employability skills of entry-level technicians in STEM fields.

Our session today will share findings of a multi-year research project promoting the development of STEM tech employability skills—a review of practices and needs in the ATE community, led by SRI Education and funded by the National Science Foundation. SRI conducted original research to understand what needs exist for early career employees entering technical fields, focusing on high-priority employability skills most in demand in technical fields, what makes employability skills so important in today's labor market, how employability skills develop, and strategies used by community college educators and employers of early career technicians to support employability skills growth. We'll be using polls at various times during the webinar. So please jump in with your response when prompted. If you have questions or comments at any time, please post them in the question box and hit Submit. And now I'd like to introduce today's presenters.

At SRI Education, Louise Yarnall has studied workforce education for the past 16 years. As an expert in educational psychology, her work is focused on how to design programs instruction and assessments of hard to learn workplace skills, such as critical thinking, problem solving, and employability skills.

Julie Remold is an anthropologist and Senior Education Researcher at SRI International. Julie works on research in both K12 and higher education settings. She has a particular interest in understanding connections between informal learning experiences, such as through clubs, hobbies, and jobs, and learning that takes place in formal classroom settings.

Ann Beheler is a national leader in promoting the Business Industry Leadership Team model that aligns curriculum content and teaching methods with future employer demand. Based at Collin College in Texas, she has won and leads multiple large-scale IT grants, and mentors dozens of technician education reformers.

And now I'll pass the microphone to Louise.

Louise: Thank you, Hope. Thank you for that introduction. This is Louise Yarnall. Julie and Ann will be assisting me in this presentation. Before we get started, I wanted to also thank our advisors for this program: Tom Crampton, Diego Navarro, Linnea Fletcher, Will Tyson, Nick Lee Smith, and Donna Milgram.

Here's our agenda. I'm going to talk along with Ann about what I call the "why" and the "what" of employability skills for about 20 minutes, then we're going to dive into how people learn these skills for a few moments, and then we'll close up with how to teach and learn these skills. And we're going to share some resources of how to do that. And then we'll finish with a Q & A.

We already discussed the project context with NSF. I wanted to give you a little background on SRI Education. It's a division of SRI International, which is a nonprofit research institute based in Menlo Park, California. And most of our work is done through government grants and contracts. And we partnered with Ann Beheler of Collin County College in Texas for this work. Now we're going to have a quick Poll #1 to find out a bit more about our attendees today.

So, go ahead everyone and you'll see the question about your role in workforce education. Please select the one that matches you and then we will review the poll results in a moment.

Okay, so no employers today, but mostly 2-year college educators. Thank you very much for that information.

So, what is driving the increasing importance of these skills? In our work we did interviews over two years with 35 educators and employers, as well as five recent graduates.

And we also reviewed research literature—273 articles—on how to teach employability skills to those entering technical fields. And this work helps us answer the "why" and the "what."

So, as this graphic representation shows there's three main trends in the technician world that are driving the increased focus on employability skills. First, the mass retirements of the Baby Boomers. Second, the constantly changing job skills and roles. Employers told us that they are dealing with labor shortages often in technician fields. They're needing to reach out and recruit to more diverse communities than ever before. And this really puts a premium on having people who are good at teamwork and good at communicating—particularly with diverse colleagues and coworkers.

The second big trend is technology is constantly changing. We've heard about AI. We've heard about automation. And these rapid changes mean that in a lifetime, or even a career lifetime, a technician worker will experience the need to keep learning and communicating well to understand, to keep up with business, and work. So, that really puts a premium on the need for lifelong learning, and that kind of communication that helps you understand “what it is you need to learn.”

Then finally, when I say “less job security,” what I'm talking about is the “context of work.” It's continually changing also. In some cases, the technician workplace is becoming more virtual. You're dealing with colleagues who are distributed all around the world. Your factories are populated by robots and co-bots. And, as we know, business models are changing. And so, your job can be outsourced. Your factory can be downsized. And these kinds of changes put strain on the work contract, and sort of change our understandings. We have to be very nimble and adaptable to the changes in our work context.

Now what are the employability skills? I'll tell you there's been an explosion of frameworks defining what these skills are over the last 20 years. And we looked at about a dozen. I'm not kidding—about a dozen of these different frameworks. The one that we decided to ground our work in is by the US Department of Education, and it's pictured here. As you'll see there are nine skills on the outside. And they are grouped according to the three categories in the second ring there: applied knowledge, effective relationships, and workplace skills. And another framework that influenced our thinking was the 2012 National Research Council Report. And like this one, it had a list of sub skills and it groups them into three categories. Those categories were a little different.

I wanted to give a little bit of information right now for those of you who cannot stay with us for the entire hour. All the information we're sharing with you today is going to be available at the web link there—the URL there: [employabilityskills.org](http://employabilityskills.org) So, make a note of that, and you can visit it anytime.

So, one of the services that we felt we could provide through our work was: we wanted to help technician instructors and employers coach people in these skills. We wanted the employers and the instructors also to feel like they could learn and develop these skills in themselves, too. Everybody's learning. And everybody's teaching. We're all helping each other with these skills.

I want to set that as a frame for the rest of this hour. And so, we realize that it's kind of overwhelming. We found as many as 60 different sub skills, which is just too much to be responsible for, or even think through. So, one of the things we felt we could really help within our research is to narrow it down to some manageable list.

This is what we're calling the five high-priority employability skills for STEM technicians. And we've organized our skills by three types. You see them here. The Relationship Supporting skills, so that you can work with your technical co-workers and clients. In the middle, the Personal Qualities that reflect the attitudes and mindsets that will help technicians succeed in their career and adapt. And then, on the other third side here, you'll see the Business Fundamentals. What do we mean by that? It's a kind of situational awareness which really means understanding the larger mission of the business you're working in as a technician and as a manager, and how the technician's role contributes to that mission.

Now, I'm going to hand this to Ann Beheler, who's going to describe briefly what these skills mean to employers in technician fields. And she's going to use some quotations from our interviews. Ann?

Ann: Thank you, Louise. Okay. You must be able to relate to people. That is a very important part of employability skills. I know for the traditional technician, perhaps this was not something that we thought really needed to be in the repertoire of skills, but it truly is. Relating, listening, empathy—are just a few of the required skills. Further, once

a person gets to the interview, which is talked about in the very last quote there on the page, it's all about relating to the employer and convincing the employer that they're going to, not only like you for your technical content, but like working with you.

And I'd like to point out, too, that something came into my email just this morning from LinkedIn. It's a jobs report. And in that jobs report for the U.S. they pointed out that the future of technology and technician jobs relies heavily on people skills. So, the person who thought they could go into a technical field and NOT have to deal with people ever again is probably going to be mistaken.

Then, what about the personal qualities for Career Success? This is all about learning. As Louise mentioned earlier, people are going to have multiple jobs in their lifetime. So, it's all about lifelong learning—ideally with the employee, him or herself, taking responsibility for continually identifying new things that they need to learn and pursuing the knowledge that is required on their own.

I think it's a fallacy to think that the employer is going to always be looking out for the professional development for every employee. It's not to say they don't try. But I think it's very important for each person to be responsible for their own resume.

And a note on the very last statement: "Probably the hardest thing to find is a person who is going to show up every day." This, of course, depends on the context of the job. If it is a situation that does not require coming to work, then there could be telecommuting. However, telecommuting does require showing up for work and being available during the day, as one should be. And, if the environment is set so that one has to arrive at a particular time, and is expected to be very, very engaged all day long, it's very important that folks do that, and not assume that it's okay to show up 30 minutes or an hour late every day, so long as the work is done. In other words, they have to be conscious of what the environment will be.

And then we get down to business fundamentals. I work with our business leaders all the time. And what I would like to say is that, in fact, employees must operate in the context of the business for which they work. The employers are telling us constantly that somehow, we have to expose the technicians to the business side of what they're doing. Now that doesn't necessarily mean teaching them about how to write a business plan, or anything like that. But understanding that they are working in service of the business for which they work. And there are a number of ways of doing that that I won't go into at this point. That's all in the report. But the reality is that's as important—each one of these across here: the capacity for relationships, personal qualities, and business fundamentals are very, very important—as we go forward.

So, I'll turn it back over to Louise.

Louise: Yeah, okay. Thank you very much. So, diversity was a key theme in our interviews, as I mentioned, in the technician field. Because of the shortages, employers are needing to recruit from more diverse communities than ever before. And when we looked, they talked about the challenges that they're experiencing. And you can see some of the quotes here.

From the perspective of an employer, or even an educator who's trying to recruit people to a technician program, one of the things they talked about was "stereotyping," and how that stereotype that's out there in the world of "who should be a technician" really is a problem in terms of recruiting enough people to this, to these fields. Particularly for women and people of color.

Second, they also, as they reached out, both educators and employers, to more diverse communities, they're encountering students and workers who are coming from situations that often go hand in hand with being a woman or a person of color. That is, challenges around consistent access to transportation, and resources such as childcare, food, and medical care. And so, we heard a lot of innovation and thoughtfulness about how to help with that situation.

Next, we also heard from our interviewees who are women and people of color describing the challenges they've experienced being technicians who are a little different from most of the people in the workplace. And so, they talked about the challenge of managing sometimes problematic interactions with those—either clients, or co-

workers, supervisors—who maybe doubt the technical skills based on kinds of stereotypes. They talked about how to manage those awkward conversations. They also talked about when life challenges crop up around transportation, and childcare, and medical crises, and so on, you know, really stepping up to the plate on how do I communicate this to a supervisor? These are like special “super skills” that we felt our five top skills—capacity to build relationships, personal qualities, and business fundamentals—all can be sort of tailored to focus on these diversity challenges, to develop better communication among diverse workers. And I will not take much more time on that point. We talk more about it in the report.

And so here we have the collection of the top five. And then the sort of focused, tailored version of them, to relate to the diversity in the workplace. Now, we’re going to stop for a moment, and have quick Poll #2, to find out about the types of employability skills gaps that you have seen.

And we give you a choice of, you know, communication, teamwork, willingness to learn. I think we’re asking for sort of like what’s the top one, if you will. And then also, if there’s another one that’s not on our list, that you would like to mention, please go ahead and write it in the Question Box in the webinar. Okay. So, it’s very interesting to see that it’s pretty balanced across these. That doesn’t surprise me.

So, how do people learn these skills? Now our research gave us a chance to review some of the theories about how people learn these skills. And I want to let you know up right up front that this is an active area of research. There is very little agreement on how such development of these skills unfolds. So, we used a couple systematic qualitative research methods to get a sense of how these skills develop. First, we asked our interviewees about their theories of how these skills develop. After all, they were educators and employers for the most part. And they had lots of experience coaching workers and learning themselves. And so, we wanted to leverage that knowledge. And then we reviewed and synthesized their ideas.

Second, looking at those 273 articles that we reviewed, we looked at that instructional research and we went through it by education level. So, we took cross-sectional slices. You know, “What are they doing in high school? What are they doing in early college? Late college? Graduate school? The workplace itself?” And in our analysis then, we noted differences in teaching approaches used at these different levels. And we noted observations that educators were making about what the learners at these levels were perceived as doing well, and what challenges they were typically encountering.

And here are the key themes on how they develop. And the themes are sort of grouped according to learners and according to coaches. First of all, it takes time and it takes practice. These are complex skills. Any one of us might be talented at one or two of them. But maybe not others—not as talented. And I think just also accepting that if you’re not born with them or people haven’t been praising you all your life for your natural talent in any of these, fear not. You can always learn them. And also, be, I guess, forgiving in a way that you don’t have to be an expert right away. It’s going to take time and practice. You’ll be learning all your life. Okay? So, that’s for the learners. And take with a grain of salt, if anyone has been telling you, “Oh, you’re not a ‘people’ person,” or something of that nature. Right? You can learn to be more of a people person.

For the coaches. We heard a lot of discomfort honestly around being put in the position of having to coach someone, a student or a worker, around these skills. There’s a sense of, “Why do I have to do this? Why do I have to help someone learn these things? Why didn’t someone else—fill in the blank: the parents? the teacher? What have you? Why didn’t someone else do this instead?”

I think we just have to kind of take a deep breath and kind of accept that things are really changing rapidly now. It is really a different ballgame today for people coming into the workforce. It’s very stressful on so many levels for all of us. And we all need to just own that we’re very likely to need to serve as a coach for others in our lifetimes to learn these skills. And that we, too, are always going to be learning them. So, even though it—given how personal these skills seem—it can feel really intimidating, and even uncomfortable, to have to engage in coaching people, it’s really important to be honest about our level of comfort or discomfort. And then seek out the methods and strategies that will help us do this work effectively.

And so, one of the strategies that we really want to underscore in our research is the notion of taking a partnered approach between education and industry.

And now we're going to do quick Poll #3 to find out a little more about how our audience members feel comfortable or not with coaching others to improve their employability skills. And you can just see it's a Likert scale. You're either, "Hey, I'm pretty comfortable. This is one of my superpowers." "I'm comfortable with some, but maybe not all." And "I am like super uncomfortable. I wish I really didn't have to do this." Okay. Good, so we actually have people attending who feel some level of comfort, which is really great. Congratulations on doing that.

Okay, so to sort of normalize the task of continuously participating in the work of developing these skills, we created a developmental framework that represents this process. The key point of this representation is that again, as I said before: the skills are complex. We're all learning them and coaching them all of our lives. So, let me walk you through this really quickly.

You know, when you come in with any skill, obviously all of us on the webinar right now, we know, we have a sense of "where we are." Like, we might already be quite aware that we have to have really good communication skills. I'll use communication as an example. And so, we don't really feel like we need anyone to sort of build our awareness, but maybe we need a little practice on certain communication skills, right? Or maybe we need to keep refining our skills. I wanted to kind of walk you through how we're thinking this works. And it works for the either the learner or the coach.

So, when you're working with a student or you're working with a colleague who maybe isn't engaged in communication. Again, using that as an example, it really might be that that person really needs some help building awareness. Like, "Hey, you know, the way you're communicating right now isn't quite working. And I have some resources," and you can help them build awareness. And then, once you do that, that's not going to be enough—just simply telling someone you've got to change. You really need to give them some space to practice, usually safe space, where they can get some feedback. And they know that they're going to get some feedback. And like, "We're a team. We're going to work on this together." You're coaching.

And then, you go down to the apprenticeship stage where they're going to try it out in a real setting. And again, it might be a little bit sheltered, if you will, where they know that they're going to get some feedback—even in the workplace—to improve and sharpen the skills.

And then they will be at a point of, "You're ready to hit the job." But even then, you're going to continue to refine. So, you might do that for communication.

Why do we keep going in a circle? Because there will be other skills. And every time you change a workplace, every time the group of people around you changes, guess what? You get an opportunity to refine these skills and work on them some more. So, it's just a continual process.

So, now I want to talk a little bit about how we did our research on "how to teach and learn these skills." You've heard me discuss how we did interviews. And how we did a literature review. What I didn't explain before is that these two data sources differed in some fundamental ways. Most of our research literature came from four-year university classes. And all of our interviews focused on two-year college instructors and their employer partners.

We really weren't sure how aligned these two data sources would be. And we didn't want to be taking ideas that worked in a four-year university setting and then sort of apply them over to a two-year college or workplace setting. So, we developed a way to see if there were notable differences between the instructional strategies used to teach or learn employability skills in a four-year computer science or engineering course as compared to a two-year college class in an information technology or advanced manufacturing or a workplace in those fields. And to do this comparison we had ways of tabulating how frequently certain instructional approaches were used to teach each of our five high-priority employability skills in both the four-year university context and the two-year context. And I will just show you very quickly the representation that we used to sort of wrap our heads around what the data were telling us.

And what you see here on the left side are the learning—what we call the most frequent learning principles that we saw coming up through the data, through our coding. I'm not going to go over these in great detail until a bit later. But as you can see, there are long lines in the four-year context around the top two here. One that has to do with explaining what these employability skills are, right? And how to do them—just sort of explaining. And then also having learners then apply the skill in a realistic sort of a team project. And you see that that's way out there: used a lot.

For all: What are the colors? "Teamwork" is blue. "Communication" is orange. "Willingness to learn" is the gray. Something about what we're calling "Work ethic" here, but adapting to work expectations. "Business fundamentals." You can see that there's a lot going on there. Not as much but a little bit around these other strategies that I'll talk about a bit more later.

Now, let's look at the two-year. And what you see here is actually something rather similar. That in the two-year and the employed context in the workplace, we heard a lot of managers and instructors talking about "I have to explain these concepts of these skills to my students or my workers. And then I need to, you know, go out there and have them practice these skills. So again, you sort of see these are used quite a bit. You see a little bit more maybe—relative to the four-year context—on "cultivating, sort of, support." "Building a culture of honest feedback." But again, it's a very similar pattern on using these skills. So, then we felt more comfortable, if you will, sort of saying, "Okay, here are the learning principles." And we actually have these organized according to their frequency. And again, a lot of this is explained in our report. So, I don't want to take a tremendous amount of time going through every little piece of this. But you, again, you can see, explain and practice, and then you see support, reflect, and play, and grow, and confront misconceptions.

Let me speak a little bit more about confronting misconceptions because this is a big issue in technician fields. I heard—and Julie heard—over and over again in our interviews that an appeal—one of the main attractions, if you will—of going into a technician field is this notion that, you know, "I like to work with gadgets and things, and I like to work with my hands. And, you know, maybe I'm not really wanting to be talking to people a lot and doing all these sort of soft, personal, interactional skills. That's really not my cup of tea."

This is really almost kind of a misconception. Because in the literature and in the war stories, if you will, from everyone we interviewed, is everyone kind of got "slapped up side of the head" once they got out into the real world. And there is literally research, where engineers and computer scientists, who also, at the four-year college, university, thought they, too, would not be having to deal with these things. Like, "I won't have to write. I won't have to do presentations." Lo and behold, they found out the hard way that, yes, these things actually really are super important! So, confronting that misconception, I think you've got to hit it hard, if you will, right from the beginning—especially with the technician population.

The other issue, as we mentioned earlier, is, "Why are people feeling a lot of—there's a lot of—shame." I'm just going to put it right out there. There's a lot of shame that we saw coming up through the interviews and through the literature, where people are like "I'm not a good writer." "I'm just not very good with people." Like there's... it's, you know, there's shame around this. And why? Where's that come from? I don't know exactly, but people had heard it. They built it into their identity. And I think this is the thing that we really need to sort of "make space for." When we're a manager, or when we're an educator, is really helping people, you know, accept that, "Maybe they don't feel great about doing these skills, but you CAN do it!" Right? So, really building a culture of growth.

So, here's the way we organize our principles. You know, we're not going to reinvent the wheel. Everyone tells us that they like to explain what the skills are. And they want to give people a sense to, you know, an opportunity to practice them. Fantastic. We're not going to change that.

But what we want to make sure is that these other supportive strategies are in the mix. That you're helping people understand you don't have to do this all by yourself. We've got your back. We're all going to be honest with each other and you can talk to me. There'll be free, open communication. One of our expert instructors we interviewed called this a "culture of candor." And then giving people the feedback, the assessments, having them reflect. And

also noticing their progress throughout a term, or an academic period, or, you know, when they're working on the job. Realizing like, "Hey, I actually really am getting better at these things!" And one of the strategies that we also thought was really powerful was what we're going to call "play," which really boils down to kind of mostly "role playing" and "taking different perspectives." And so, especially when you're putting people in teams, really thinking strategically like, "How can I mix this up?" And have one person be the leader this time, but then they'll be the leader... They WON'T be the leader next time—someone else will. Give everyone a chance to see what it's like to have a different perspective.

Now, we're going to do a quick Poll #4 to find out one thing that could help you, or those you lead, to coach or even to learn these skills better. Okay. And so again, we picked professional development methodologies. And we are so "open" if you want to fill out the Question Box and offer another one. But again, this stuff takes time. You know, watching others who really you think know how to do this work. Maybe some workshop, so you can practice different coaching approaches. Maybe having access to a community of fellow coaches, so that if you have some situation come up that is really challenging, that you have some people who have your back. You can talk to them and work through it. And then also, the notion of if you're going to try team projects, practicing them from the learner's perspective before you actually try to teach them. And I believe that, not just instructors can use these, but we heard a lot of people—believe it or not—in the workplace. There is a lot of formal training around these skill sets—at least among the people we interviewed in the workplace. It's a super high priority.

Okay, so John are we ready for our results? Interesting: practicing activities from the learner's perspective. I'm looking forward to seeing some of the new ideas that are coming through. We can discuss that more in the Q&A later. And look at just watching. I do agree that just seeing is understanding so much, particularly with these sorts of skills.

Now I'm going to hand it over to Julie Remold, who has helped me every step of the way in this project. I'm looking at her right now. Like, Thank you! Thank you! And she has web-authoring skills. And so, she has been creating our website. And she's going to share with you what, how, you know, what we're going to offer on this website. And we really want everyone to come to it and use it.

Julie: Thank you, Louise. I should step closer to the microphone.

So, the URL, Louise has already given that. It's [EmployabilitySkills.org](http://EmployabilitySkills.org). One word. No punctuation between them. And the first thing you can access there, just directly from the home page that you land on is: there's a link to download our PDF report. And I recommend that for anybody who's interested in knowing more about, well, what exactly were the research methods that they used? Or getting more detail on findings. Reading some more quotes from people who we interviewed. Or seeing some of the references that Louise mentioned. Then I'm just going to go through what's on the website—from the way it's organized by the top-level menu.

So, the first menu item is Skills. And this is a section of the site that sort of provides more detail on what each of the skill areas are. So, there's a link for each of the top-level skills, and you can read more about them there.

The next section of the website is Development. It's about how the employability skills develop. And it includes information on the Four-Stage Developmental Model that Louise talked about earlier. And also, the Learning Principles that she just described.

The next part of the website is a section called Teaching. And this is a set of searchable resources that we've started to collect. And this includes resources that we asked people about when we interviewed them. And they told us: so, these are the things that I use to support my work with early career technicians. It's also resources that we found in the literature scan. And this is the section of the website that's most under construction right now. And the reason for that is we have a few resources up there. And we're continuing to build it out as we request permission from original authors to share their materials. So, you'll if you visit today, you'll see some materials. And if you visit in a few weeks or a month, you'll see that it's growing. And that's something we'll be working on over the next several weeks.

And the last, we have a page for this webinar that you can reach from the top-level menu. And at the end of that page, not showing unfortunately in this screen capture, but if you scroll down from the webinar description, you will see that there is a blank Discussion Box and that is an area that we're going to keep open for discussion for two weeks starting today. And we're hoping that some of what we've talked about today, and what Louise is described about our work will raise questions for some of you or bring up discussion topics. And we encourage you to come visit our website, click on the webinar link and participate in that discussion.

We are going to work with a collection of any questions that people might have posed today in the Questions Box of your webinar window. We will copy those questions in there anonymously and give our best responses and suggest that others who have experience answer those as well.

Louise: All right. Thank you, so much, Julie. And I see we have about 15 minutes left and that's great because the next section is Questions and Answers. And so, I wanted to turn it over to Hope, and John, and anyone else on the presentation team who can see any of the questions that are coming up, and we also can engage in a continued free discussion at this point. Hope? Are you going to open up the microphone, so people can speak if they want to?

Hope: We've got a couple of options. So, if you have questions, feel free to just post them in the question box, or if you'd like to actually speak, let me know by "raising your hand" and then I can unmute your phone line.

We've had a couple of comments and questions pop up. One came up earlier in the conversation today. And that was, Louise, a question that often comes from students: and that is, how to obtain clear expectations in the workplace from a supervisor? So that, someone is communicating clearly to an entry-level employee, so that they understand what those expectations are in terms of their performance.

Louise: Yeah, we interviewed five recent graduates and they, I think, spoke to this as one of the primary initial challenges, if you will, when you get into the workplace. Pretty much we had, I think (Julie, I'm looking at you!), I think we had some people had sort of a variety of experiences, right? We had some people who were very comfortable. They had felt like they had a good relationship with their supervisor. They almost had a mentor. And that they could easily sort of talk to that supervisor. But then we had the other, you know, smattering of experiences where, you know, they didn't have that kind of comfort level. Or maybe they were already in a position of managing people. And they hadn't maybe handled it terribly well. So, we had a real mix. And I think it depends a little bit on if you have a skillful manager. And you can usually tell if you have a skillful manager, because the ones that we talked to who WERE skillful said that they do things like, you know, they'll say things to the employee like, "I'm going to be coaching you." Or "I'm going to be talking with you very candidly." "I'm going to... I might take you out to lunch, and we'll talk about things," right?

These are kinds of the strategies that I think the people who know how to do this coaching talked about. Sometimes their courses, formal courses, that they offered. But, in terms of when it was problematic, Julie, do you remember anyone who is able to kind of work? Did they have a strategy for working through that?

Julie: I remember most clearly was this idea of "it has to be something that you set up on a sort of workplace culture level." Yeah, you have communication about feedback. It's not something you can spring on a person unexpectedly and expect them to be open to hearing the feedback and responding to it, you know, not defensively. I don't remember anybody telling us that account or situation where their culture wasn't set up, but that's because we're talking with experts.

Louise: Yeah, there was one of our recent graduates, I think had had different managers. I'll put it that way. And one was not very helpful or very skillful. And fortunately, this individual actually went and talked, I think, with Ann! She went back to one of her College instructors. And this case Ann might want to take over the story. But she knew that she had this back up from her instructor and community college. And she went to her and she said hey, I'll tell you what's going on. And I understand, Ann, she got some really good guidance from you. And then she could go back to the workplace, and sort of know what to do.

Ann, did you want to add anything on that one?



Ann: Sure, I can talk about it. Some of you who may know me may know that I've spent a lot of my life in corporate America. A lot of my life as an entrepreneur. And basically, most of my recent life in academia. So, I've lived this. And I certainly was one of those technicians that did not want to have to exhibit employability skills myself, that realized through living on the job, that it was a requirement.

I mentored this young lady and she was going through our program. Because she was literally the only woman in it! And there was concern about whether or not she would, in fact, have enough support to make it through. Because she actually had majored in something that was more in the art area and going into networking was going to be quite different for her. Anyway, to make a very long story short, what I advised her to do, and what I would have advised just about anybody to do in this situation is "be vulnerable." Go to the manager. Even if the manager is not skilled, and say, "I need to understand from you what expectations you have of me in the workplace with respect to employability skills, and actually indeed with respect to content skills as well—technical skills." And ask if the person is willing to set up a regular meeting: perhaps every month, perhaps every two weeks initially, to discuss these sorts of things. And even the person, who perhaps is not all that skilled at coaching, is usually willing to do that. And if they say, "No" (I gave her advice on: if her manager actually said "No,"), to ask the manager if the manager could actually recommend somebody else within the company with whom she could work. And that actually worked out pretty well.

Louise: Fantastic!

Hope: Louise, we have a couple more questions for the project.

Louise: Okay.

Hope: The first one is probably very easy for you to answer. Comes from one of our participants who said, "Where can I find the handbook that was listed when we first announced the webinar?" Could you maybe, you or Julie, show or just tell us where in the website we might find the handbook?

Julie: Yeah, this is Julie. If you go to the homepage of our website, so [employabilityskills.org](http://employabilityskills.org), and that's all one word with no punctuation. That's sort of the Welcome screen. The right-hand column begins with "Our *Working Stronger and Smarter* handbook describes our research and findings along with resources and ideas for educators and employers." And the title of the handbook is a link that will download the PDF directly.

Hope: Great. Everyone is saying, thank you. Thanks, Julie.

Another question, related to resources, but this might require us to put our thinking caps on a little bit more. One of our participants is looking for an array of employability skills videos and or PowerPoints that they could use in their online course—like that they could plug into their Blackboard course, for example, to assign students to watch those videos or to do some exercises. Do you all... Does anyone? Ann? Julie? Louise? have recommendations for a source for any of those?

Louise: The short answer is, "No I don't have that. I don't have videos. I think we do have some PowerPoint material. And which we will be posting, pending getting permission. But video...one of our interviewees also had this desire for video. And I think it is something that needs to be done. I actually don't know if we have any.

Hope: Okay, I was just going to say that our project has received similar inquiries when we've been out on the road doing presentations and teaching workshops. And we've actually added that to OUR to-do list—to just start in the new year to begin working on towards a video collection.

But, in the meantime, John and I have been able to access some resources that are very short videos from the *Goodwill Community Foundation*. If you go to YouTube and just search for that, you'll see a collection of them that will come up. And they're designed actually for the job seeker, for the incumbent worker, the student. And there's a whole array of topics. Some are longer than others. But several of them are very short just like a minute and a half to two minutes. And so those might be links that you could share in online courses or even in face-to-face. But stay tuned, because more hopefully will be coming this year.

So, Ann? Other suggestions?

Ann: Well, we were going to talk about the virtual internship-externship that we used in a previous very, very large grant. We kind of fell into it. And there are a few videos. (I'll have to actually find the link. I can't give it to you right off the top of my head because that particular grant is over.)

However, the reality is that we all know that internships are a really good way for people to get practice at working. And also, a really good way for them to convert the internships—in a lot of cases—into full-time jobs. We also know that internships don't align with our semesters very well sometimes. And we also know that some of our students work. In fact, a lot of our students work and can't give up their full-time job—even if it's a paid internship or apprenticeship that lasts for a few months—because the security of the full-time job is what's putting food on the table.

Anyway, very long-story-short on this: we instituted a virtual internship-externship, which essentially is a case study with an RFP (Request For Proposal) demanding that team members in this group (in this it was a capstone or an advanced course), the team would develop a solution to the RFP. And they would actually present that to a list of business members. And get feedback from that. It's more of a discovery type of a thing. And what happened is: we had one of our business members actually is a mentor for each of the teams in the class. It was a small class. And what turned out is that both faculty and students learn the employability skills in practice more on a discovery mode. And the thing that was good about that was that they were discovering that they needed to do various things without us branding them as "soft skills" or "employability skills." It's not, you know, last year or anything, but some of the things are really relevant because not only did the students pick up some of the employability skills of working in teams, and so forth. But the instructor, who thought he was going to be just kind of watching this thing said that he felt like he had learned a lot as well.

So that's kind of a very short explanation of what's involved, but it's one way of teaching the skills with a businessperson actually saying and providing credibility that these are skills that are needed.

Louise: Thank you, Ann.

Hope: Louise and Julie, were there other ways that educators and employers could partner in developing these skills any other suggestions you might have?

Louise: We also thought in terms of everything "in front of" or "before" internships. So, you know, particularly when you're just starting a term, or an academic term, and you want to underscore the importance of these skills that are going to be used throughout your term. A classroom visit from someone actually working in the field is GOLDEN, because that individual can tell some stories of what it's like out there, and how much using all of these skills is really important. And one of the phrases I heard used was, "The students might not believe me, but they will believe somebody who's out in the workplace." So that little visit is one thing that I think's useful.

Julie: Well, we talked a lot about educators being aware of the particular challenges of people from groups underrepresented in their fields. So, being aware that the interpersonal skills needed when you're the only woman in the room might be greater than the interpersonal skills of the male peers. So, for educators to be preparing students for particularly challenging interpersonal situations. So that the foundation they're building will work for everybody.

Louise: And maybe again having the role model, if you will, the sort of "the woman in tech" who will come visit the classroom. And you can talk about the skills, in general, but then also can have the sidebar conversation, or even you know the full conversation with everyone in the room, sort of saying, "Hey, this is what my experience has been." That kind of candor is very powerful.

Hope: Right. I'm looking at the clock and I know we're getting close on time. So, Louise and Julie, I don't know if you want to progress now to some of your wrap-up comments before we close for today?

Louise: Okay. Sure. Thank you, Hope. So, here's our URL again. We welcome you to that website as well as we'll give you the NSN website again. We'll also be posting all the links that we are going to be gathering in the next—not just the next few weeks, but the next couple of months. And also, here are our email addresses. Please feel free to

reach out personally. We're going to be sending to all of you a survey. Julie, do you want to quickly talk about that survey?

Julie: It's just a short multiple-choice survey that we would very much appreciate responses on, so that we can understand how useful this information has been to you. It will help us refine what we put on the website in terms of resources. And know whether or not this work is going to have an impact on your own work with the learners.

Louise: Again, here's the standard disclaimer that we need to share. There's our grant number, if you want to look that up. And again, I wanted to thank Hope Cotner and John Chamberlain from *Necessary Skills Now* and CORD. You guys have been fantastic. And here's their link, too, for more information on these skill sets. Thanks, everyone.

Hope: And we wish you all Happy Holidays! And thanks, so much, for joining us today.

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