

THE FIX

A TRADES CONVERSATION

HOSTED BY **Oatey**

The Fix Podcast – Transcription

Guest: Connecticut Technical Education and Career System (CTECS)

Episode Runtime: 23m 11s

00:00:05 [Katherin Lehtinen](#)

Welcome to The Fix, the podcast made for the trades, where we sit down with inspiring individuals across the trades to discuss their unique take on the industry, including career paths, job site stories, overcoming challenges, and everything in between. I'm your host, Katherine, a marketer here at Oatey with my co-host and friend, Doug, one of Oatey's resident experts in all things trades. The Fix is more than a podcast. It's a community, a community built to support tradespeople and inspire the next generation of essential pros. Let's start the conversation.

00:00:45 [Katherin Lehtinen](#)

Well, Doug, today we have two guests who are sharing their knowledge and experience, plus they are both products of Connecticut's technical schools. Yeah, I'm going to be honest

00:00:56 [Doug Buchan](#)

with you. You know, I'm always excited. That's just who I am. But today's guests, they really hit home for me because these these gentlemen, they started off in the trades. Yep. And now they've taken it to, they're part of an organization, they have over a thousand students that are earning college credits, they have over 20 campuses available, they have 31 career paths with a 97 % graduation rate. I mean just absolutely phenomenal organization and I think these guys are gonna hit a home

00:01:24 [Katherin Lehtinen](#)

run. I love it. Well welcome Brent McCartney and Pat Carleglio from Connecticut Technical Education and Career System. Hi everyone, thanks for having us. Thanks for having us everybody. You got it. Well let's start by giving a

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little bit of background since we talked that you are a product of the system. Can you talk a little bit about your background and what kind of got you to

00:01:45 Pat Ciarleglio

this point today? Sure I can start. So I graduated from our school in Manchester Connecticut. It's Hallowchenech Tech and I was a carpentry student there and went directly into the field after school and And I worked residential, commercial, until a friend of mine mentioned that I should get into teaching carpentry. And when I was done laughing about that, I did. I started teaching in Pennsylvania for about a year, and then I taught in our system, starting in 2010, and did that for about eight years. And now I'm in my current role at our central office, where I oversee the architecture, architecture, building and civil, carpentry, landscaping, and masonry shops for the state.

00:02:33 Brent McCartney

Very cool. Yes, I have a similar, you know, I went to Plattec in Milford, Connecticut, and I graduated from the plumber heating department. I was on the work -based learning program back then, got started crew and apprenticeship hours even before I graduated. I graduated from the school and I went right into the trade where I eventually opened up my own business. I had a pretty successful plumbing heating contract in business here in Connecticut. Then I moved on to education. Actually, I started teaching adults the apprenticeship program that we also offer here at CTEX and then moved into 9th through 12th teaching where I'm up at central office overseeing all the programs. So I oversee plumbing and heating, electrical, HVAC, and then plumbing, heating, cooling. So I oversee all the licensed construction

00:03:18 Katherin Lehtinen

trades. Wow, that's just awesome. And so many different locations, Doug, as you kind of talked about that they kind of cover. So can you talk to me a little bit about, you know, what is CTEX, you know, as a system? What is its purpose? And how does it provide value to those that attend?

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00:03:36 **Pat Ciarleglio**

Sure. So CTEX is a district of technical high schools. So all of the technical high schools within Connecticut are within our district. So there's 20 locations, as Doug said earlier. Two of them are adult aviation schools. One of them is a technical education center. And

00:03:52 **Pat Ciarleglio**

And

00:03:52 **Pat Ciarleglio**

then 17 of them are diploma -granting high schools. So our students, unlike in other states, are our students. So when they come to our building, they get their academics and their trade all in the same school. Oh, cool. Yeah. So we have 182 days of instruction. So 91 of them are on the academic side and 91 of them are on the trade side. And, and so what will happen is ninth and 12th graders will travel together in 10 and 11 will travel together. So if 9 and 10 are in trade, they're there for full day 10 and 11 will be in academics and about every 10 days. We'll say on average they switch. Okay

00:04:34 **Doug Buchan**

Okay. Yeah, I have a question. So you had mentioned earlier about the licensed trades. Okay, so You bring these students in you take them through the curriculum you get them exposed hands -on and then do you carry them through to their actual testing so they can obtain their licenses or how does that work? So yeah in Connecticut you know all

00:04:57 **Pat Ciarleglio**

occupational license trades you know students would need to get their on -the -job training through a sponsor or you know a contractor but our students receive all the related instruction along with the high school diploma so in Connecticut it's any of the unlimited licenses in the plumbing HVAC or electrical fields it's 720 hours of related instruction, then 8 ,000 hours OJT, on -the -job training. So our students receive all 720 hours of related

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instruction and up to 1,500 hours of OJT towards their apprenticeship. And then we place a good majority of apprentices in Connecticut come from CTEX. So they accrue their OJT hours while they're working. And then about three years later, they go for a journey person's license. and then two years after that to get their contractors or master's licenses.

00:05:48 Doug Buchan

Okay, wow that's pretty impressive. Now with the changing technology that we have I mean obviously every day you'll turn on your computer and there's new technology out there. What's your what's your guys approach to staying current with all of these new technologies? You know do you have a team for that? What

00:06:06 Pat Ciarleglio

do you do?

00:06:09 Pat Ciarleglio

So we have program advisory committees that meet minimum twice a year at each of our programs that, you know, influence curriculum. So, anything new and up -and -coming gets infused immediately into our curriculum. So, our curriculum is never stagnant. It's a fluid document. So, kind of like a living document that gets updated constantly. So, like we're in the middle of a curriculum revision right now. So, our teachers start the 25th. So, they get introduced to all the new curriculum changes. And those program advisory

00:06:40 Pat Ciarleglio

committees are made up of industry. So each one of our programs, so not just plumbing in general, each plumbing separate program has their program advisory committee of the industry that's in their area, so that their school kind of serves. And those industry will come in and they'll talk about the soft skills or employability skills that students need. They'll talk about those changes in technology. And what happens is we adapt our curriculum so that we can be the pipeline. So they tell us this is where we're seeing students lacking or this is where the field is shifting so we adapt to that so that way our students are ready to meet their demands.

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00:07:21 **Pat Ciarleglio**

I see. And we also yeah I'm compounding that so we actually have professional development days that you know Brent and I are responsible for for our clusters so any new technologies the teachers would get trained with on that new technology during these PD days. So it's it's kind of like a whole holistic

00:07:38 **Katherin Lehtinen**

circle that you're looking at. Yeah and it's hard to keep up with technology I know that we say everything you know new products that come out in new ways and also I would imagine from codes and everything else that evolve and change that it's important to have that especially from the industry so that's that's great news. Yeah. So can you talk about what programs and career paths do CTEX schools provide so that we get a little bit better understanding of what

00:08:02 **Pat Ciarleglio**

that looks like? Sure so at CTEX we have 31 career paths as Doug alluded to earlier, and really all over the place. So, we have hairdressing, we have transportation trades like automotive, collision repair, diesel, a lot of IT trades, and then obviously Pat and I oversee the nine construction trades, which we've mentioned. So, each school is designed, I think our school with the lowest amount of trades has about nine trades, and the highest is the one we're in right now, which has 15 trades. But those trades, again, are based on Department of Labor data, and so we can make sure that we're meeting those demands. So throughout the state, it's a little bit different at each school, just to make sure that we're hitting that demand. And one of the cool things that we do when students come in, in their ninth grade year, is called Exploratory. So each school has, like I said, their separate trades. Well, now students will get to go for two days in every single one of those trades, So they can

00:09:05 **Pat Ciarleglio**

kind of see what plumbing is, what carpentry is, what IT is, what hairdressing or culinary and then they get to pick three shops that they kind of want to dig a little deeper into and they go back for four days to really learn

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the pathway, learn what they're going to do with their time with us and after so that they can make an educated decision about their about their future.

00:09:28 **Katherin Lehtinen**

I love that because I was going to ask a little bit about what's the evaluation period look like and I would imagine it's probably a combination a little bit of both of them talking about their skill sets but then also getting exposure to the different trades which is it's a great opportunity. I would love to just go and dive in a little bit deeper you know for a couple

00:09:44 **Doug Buchan**

days would be such a great experience. Yeah being from the trades myself you know having that exposure to multiple ones that helps me find my niche you know I may have a bad experience on one day but if I get to come back on day two three and four I may see a bit different side. So I think that's fantastic you guys are giving those multiple day experiences.

00:10:06 **Pat Ciarleglio**

And Doug, you mentioned being from the field yourself. So are all of our teachers. So your typical teacher would have a master's degree in their field to get certified. Ours have a minimum of eight years of experience in their field to get certified. So every single one of our teachers, whether it's in criminal justice, carpentry, anywhere that it is, they were in that field. So when they're teaching, it's not like they're teaching out of a book that they don't know what they're talking about. They're teaching the theory that's in the book, but then also the little tricks of the trade, you know. Yeah. If I'm ever up there, maybe they'll

00:10:41 **Doug Buchan**

let me guest teach one day. What do you think? Oh boy. I don't know if you'll ever leave.

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00:10:48 **Pat Ciarleglio**

Yeah. The teachers for the licensed trades, they, in addition to what Brent just said, they also need to have a master's license in their trade. So unlimited plumbing license and plumbing, unlimited HVAC license, and HVAC and unlimited electrical. So that's great. That's a requirement. Brent's going to talk probably a little bit about production work, off-campus production. So the reason for the master's license is for permit permitting. So that makes sense.

00:11:13 **Katherin Lehtinen**

So talk to me a little bit about a child that's in eighth grade, and they're maybe interested, or their parents want them to explore, or they, you know, a counselor says they should look into CTEC. How does that path look and how do you get students or recruit students into your program or do you not need to recruit? They basically have a wait list to sign up. What does that look like?

00:11:39 **Pat Ciarleglio**

So we do have a wait list to sign up, but we do recruit heavily. Because for a while in this country, if you didn't go to college, then you weren't gonna be successful in life. Or that's what society told us, right? And so we kind of had to show that that wasn't true. So we do get into middle schools. Our counseling departments do get into middle schools with some recruitment material so that they can see what a plumber's pathway looks like, right, and that you can be very successful in those fields, but all of the trades that we have. So we do recruit pretty heavy. I would say that in the last couple of years, there has been a shift, a noticeable shift, And we've had a lot more interest, you know, I think people realize now that there you can be very, very successful in a construction trade or in a trade in general.

00:12:32 **Katherin Lehtinen**

Yeah, that makes sense. Now what about maybe someone who is, do you do anything to support those that have are past the 12th grade and they're interested? Do you guide them to a different area or do you help support? How does that work?

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00:12:44 **Pat Ciarleglio**

We actually we have a very vibrant adult education apprenticeship program that we offer at seven over 20 locations, and they're spread out across the state to make it more strategic and convenient for an apprentice to take courses. We have seven schools and we have close to, so last year's enrollment was 3,106 enrolled apprentice students. So it's, you know, so the Department of Labor currently has something in the area of 6,500 apprentices. That's a fluid number, it changes constantly. But we provide close to 89% to 90% of all those apprentices in the state of Connecticut from our day school programming and our evening adult apprenticeship coursework.

00:13:27 **Katherin Lehtinen**

Yeah, that's impressive. I would imagine you also probably have a pretty good bank of employers in your areas of where your schools are that are saying, me next, I'll take another one. I would imagine that that's sometimes got to be a challenge too.

00:13:41 **Pat Ciarleglio**

Being, being one district really helps that and being state run. I mean, we have 11, roughly 11,500 students daytime too. So, being so large, you know, it is, industry is constantly trying to team up with us, partner with us. We talked about the professional development. Usually that's sponsored by industry. So, when we are introducing new technology or new skills. Usually an employer is more than willing to help us with that. Sure. Also like career fairs, scholarships, we do get our fair share of help from

00:14:19 **Katherin Lehtinen**

industry. Yeah, I would imagine so. That makes a lot of sense. So can you talk to me about what support and resources, you know, are those for, let's say they get in and they're now an apprentice, what if they want to change a career path or

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00:14:35 **Pat Ciarleglio**

or

00:14:35 **Katherin Lehtinen**

they need some more education. After they're done with their time at CTECH, is there an alumni program? Is there a way that they can give back? Is there a way that they can continue to learn?

00:14:45 **Pat Ciarleglio**

So with this increased interest in the trades and kind of the shift in society's perception of the trades, we are creating what's called the Career Center. The director of the Career Center, Kerry Markey, will be creating a platform just for that. It will be a way for employers to reach our current students and to reach our alumni. So we're pretty excited about that. That's going to launch this fall and I think that that's going to be a game-changer for just the connection

00:15:16 **Katherin Lehtinen**

or building that network. Yeah absolutely I would imagine so. Well obviously

00:15:21 **Doug Buchan**

everything that you've told us so far is absolutely impressive. Now I'm a guy who likes to look into the future so my question would be from where you're at right now, where do you hope to grow to in the future?

00:15:36 **Pat Ciarleglio**

I mean, that's a great question. I think that in the future, we would like to expand. We would like to take the seven schools that we do at night and expand that because we do that right now, the seven after-school programs offer apprenticeship classes, but I do think that we can expand that into other realms and other trades. So I do think that expansion of our locations would be good. I think that we would be able to hit maybe

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some of the job classes that we're not currently hitting. I mean, we have 31, so I think we're doing all right. But as we talked about, industries are constantly changing, right? AI, for instance, is gonna be big. What do we have to do to prepare students to be ready for that shift? So, yeah, I think just expansion of our programming.

00:16:30 **Pat Ciarleglio**

We're currently offering a lot more classes than when I first started in my position. This year we're actually starting an automotive after-school program over at the school in Bridgeport. And then we're also starting a hairdressing, because that's a licensed trade in Connecticut. So, we're starting the new hairdressing program at our locations after school as well. And then we also have another avenue for students who didn't choose our 9-12 pathway, and if they want to come to CTEX, let's say they went to a local sending town school, high school, they could come. We have what's called a career academy. So we take 10th and 11th graders, 12th graders that didn't choose CTEX but want to learn some CTE after school. And that's been a very successful program. and we piloted it out at the Wilcox Tech at Meriden and it's expanding every year.

00:17:22 **Katherin Lehtinen**

That's amazing. So if, let's say another school came to you from a different state and they had said, what is the one thing or a couple of things that you would highlight that you would say are the things that really changed the game for you at Ctech or really helped you kind of grow and expand to where you are today? Could you, what would that advice be?

00:17:43 **Pat Ciarleglio**

So I anticipated this question, I'm so happy that you asked. All right. So I would say a couple of things. First is industry. You have to be relevant within your area. So you might like a trade, but if kids are not going to get a job in that trade, then that can't be your focus. You have to focus on industry needs. And then also you need to talk to industry about what's going to make your students, whether they be adults or children, and what's going to make them competitive? So for us, that is credentials. We look for any credential that we can give kids. OSHA 10, OSHA 30, Pat's plumbing shops get a bunch of installation credentials, right? So I think that that's huge. And I

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think the second thing that you need to do is you can't just talk the talk. You have to walk the walk. There has to be experiential learning. So here at CTEX, what we do is we do what Pat talked about. We call it the student workforce. We have really two veins of the student workforce. So the first vein is with our

00:18:46 Pat Ciarleglio

teachers. So they go off and they do live work for customers. We call it production. So we have a fleet of buses. Every one of our construction trade teachers has their CDL and they bring kids out to jobs. So they're doing real rewiring houses or redoing services. They're putting on additions, building homes, sheds. They're swapping out furnaces and boilers. So they're getting that real hands -on experience. And then the second vein is what we call work -based learning, or WBL, is where the student is teamed up and they actually go with an employer and they actually go to work instead of coming to school on their trade cycle. So they will go and get that hands -on experience with the employers. And I think this is really what sets apart the training because learning it in a book or in a classroom is much different than touching it. And when we talk to employers, the employability skills are almost more important than the content skills. We hear that all the time. And you can't teach employability

00:19:44 Pat Ciarleglio

skills in theory. You need to put kids in situations where they have to put their phone away, they have to come on time, they have to be in a uniform, they have to communicate effectively. And the only way to do that is to practice. So those would be the two things. I would say reaching out to industry and providing the practice through, with, excuse me, experiential learning.

00:20:04 Katherin Lehtinen

Yeah, and I would imagine also students would wanna do that too. I mean, if they're going into the trades, it's because they probably have a desire to be more hands -on, to not be in a classroom all the time. So it probably also fits their needs that they know, hey, listen, I'm not gonna be behind a book for eight hours. I'm gonna do a little bit of balance of both.

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00:20:22 **Pat Ciarleglio**

And they actually, the students who are in my trade areas, they actually need to be registered as a pre-apprentice through the Department of Labor. So they accrue hours towards their on-the-job training towards that license that they eventually end up getting. So it's an

00:20:36 **Katherin Lehtinen**

awesome experience. Yeah that is amazing. So we talk about at the end we always like to close with kind of your vision and hopes and dreams for what you would like to see for the trades in the future. You know with the work that you're doing and your knowledge and background you know as you're looking as Doug says round third and head home for retirement or in the next 10 to 15 years what would you love to see the trees evolve into? And I love that perspective from both of you.

00:21:08 **Pat Ciarleglio**

Oh, I would like to see, just like Brent said, more expansion of our adult opportunities. Currently we have one tech ed center that serves adults. You know, it's like a full-time two-year program for the HVAC program that I run there. But I like to see that spread across the state. So if students who don't want to go to school at night, they want an opportunity to go daytime to, you know, have an opportunity to go someplace regionally around the state to get their training.

00:21:36 **Katherin Lehtinen**

Yeah, that's great.

00:21:38 **Pat Ciarleglio**

For me, I would like to see the trend continue that I'm seeing now. So I'm seeing safety being, you know, a number one concern on most job sites now, not just big unionized or big commercial sites. It's all over now. And I'd like to see the perception of tradespeople be the same as doctors and lawyers and teachers and all these other these other fields because I you know I grew up a trades going to trade school and being a trades kid and

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and sometimes you think to yourself and I've heard this on some of your other podcasts you think that maybe you're lesser than these other people and and you're not right it's how society saw us for for so long so I would like to see that trend keep going and and and have trades people be proud of their profession and be proud of what they can do and I want people who are not trades people to also be proud of them. I want them to see that it was a viable pathway and this world would not exist without us. So that's what I would like to see. Yeah, I think

00:22:38 **Pat Ciarleglio**

that's

00:22:38 **Katherin Lehtinen**

excellent and a great way to close. We couldn't agree more and I just want to thank you both for taking time this morning telling us a little bit about the work that CTEK is doing and obviously hopefully we can figure out a way to support you through some product donations as well as banners and help support the work. So thank you very much for for your time today. We appreciate it.

00:22:59 **Pat Ciarleglio**

Thank you for having us. Thank you.

