

Electrical Technology

Advisory Board Meeting Video Transcript

11/5/2024

I'm gonna use my phone to record because I can't get Google Meet to Work. So last year, we met in the spring and we went over some stuff, and I just gonna kinda touch base with it again. So I'm gonna just start of an overview of the program in the student body. So this year, I had I started the year with 10 students, and 2 of them left. 1 of them went back to the high school.

1 of them went back to the Barrie Tech Center, so it left me with 8, which is a good number because one of the things about CPE is a lot of our funding comes from Perkins 5, which is a federal grant sponsored money to help us run, and programs with less than 8 students generally don't qualify for the funding. So I'm I'm glad that I'm at 8. Of course, I'd like to be much higher than that, but but I'm not right now. So I got 8 students. I have 6 RUHS students, one student from Northfield and then one from Barrie.

And that Berry student wasn't able to get into the Berry electrical program because it was full, so the next option is to come here. I have, 2 females this year. One is a junior, one's a senior. My senior female is returning from last year. I have 4 students in the program who are here for the 1st year or the first time, and I have 4 students returning to me in the 2nd year.

And out of those 4 1st year students, 3 of them are juniors, and one of them is a senior. Now my 4 returning seniors are either all out on co op or they're shadowing some different jobs to to get out on co op, so I'm thankful that that's working out for them this year. In the past couple of years, I've had kind of a hard time, with that. And so this year, I feel like I've made some good connections. One student's at Benoit.

One student is working for, well, it's Pump Tech. They have a couple of different names, but, he works with the people who, like, rebuild pump stations and stuff. So not every day is electrical, but they do do a lot of electrical, and it's, like, kinda control wiring, which is a little different. I have one student who's working for her family business, and they do more, carpentry work, but she does get to work with electricians when they come on the job and stuff. And then I have one student who's been trying out a couple of different things.

He shadowed at Benoit. He's doing a job shadow this week at, for field service, and so he's just trying a few different things until he finds something that he wants to do. So co opting has been pretty successful. And one of the things I did this year, in my notes from last year, one of the recommendations that you

guys had made to me was that you thought maybe students should have more math background. And, what had happened is that the CTE people, we take this test.

The students take this test called WorkKeys, and WorkKeys is like the CTE version of the ACP. And so the WorkKeys test go to the state, and the state reports it to the federal government, and that's how we show that our students are learning. And it's one of those, like, 55 minute tests, and it's multiple choice, and there's a math one, a reading comprehension one. I think they call it workplace documents, and there's another kind of a writing medium model as well. And what we found last year is that the students just didn't have any motivation for it.

And it placed us in a situation where we looked like our tech center was scoring really well, compared to other CTE centers around the state. And so that led the administration to have extra kind of you basically doubled the amount of academic time that our students were in academics. So they started this year in, 4 hours a week during the academics. Base 4 day yeah. 2 8 hours a week.

So there are 2 hours a day, an hour math, hour in a week, 4 days a week. And so we just had our WorkKeys test back in the early part of October, and I think overall and I haven't seen the final score. But overall, I think we've we've done a lot better, and we what we did was we tied WorkKeys to being able to go out on. And so WorkKeys is scored, like, 1 through 7, and 5 is the mark where you're being proficient at that skill. And so if you scored a 5 or above on all 3 of your work keys, you're allowed to go out on pull off full time.

If you didn't, you still have to stay here for your academics, and they place you in the morning academics, and you'd be able to leave at 11 and go out and work, which in the trades, that's really hard to do because we all leave at 7 in the morning. So there's a little bit of, I don't know. It was it was hard for me to to like that. But I'm happy to report that all of my students scored 5 and above. And the way I I like to look at it is I have 8 students, and they each took 3 tests.

So that was a possible 24 tests that were taken from my students. And I only received notice that I had 3 fours, out of those 24 tests, and the rest of them were all fives and sixes. And so I don't know what to contribute that to other than, like, you know, maybe my teaching style is effective. Maybe that this extra time in academics was effective. Maybe having the buy in that this was, like, key out of here was part of it.

Or maybe some of our new students coming in, are just, starting to be a little more academic than the past few years that I've been teaching. I'd like to maybe blame some of that on COVID, and students were kinda lost in the week during COVID, and they, I don't know, maybe they didn't have the motivation and stuff. And so now, like, a few years out of COVID, people have been back in school regularly. So I'm pretty happy with those results, and those students will have a chance again in a spring to take retake the test. And hopefully, they'll, you know, get those scores to a 5.

And, you know, as far as I know, I'm the only program that's had that much success. So I I have a really great group this year. Do all the programs fall on the same model with the co op, you know, out of this course? Or Yes. That's a, center wide policy.

The other way you can get out on co op is if you have all of your graduating requirements, which most students have some kind of requirement in their senior year. But really, the idea is that we set up some kind of educational learning piece tied into your program, and every week, you're having to, like, answer some questions. And so you're still kinda getting some academics when you're out on coop. I mean, you're still doing math. You're still reading manuals and stuff, so it's it's still there.

So that's my big thing on, academics and the work key scores and my testing update. Did you have any testing year 1? Yes. So last spring so that that's the big thing for my program is that at the end of the year, they're not required to, but they take the year the Vermont State Apprenticeship level 1 test out again. And if they pass it, then they're basically they don't have to do that when they leave here.

They can start in year 2. I had 7 students take it, and 5 of them passed it, and we're able to to move on. So that's you know, again, that's another pretty big deal for me. That piece of paper, that big thick packet, if you go to the very back page, there's some highlighted stuff on here. And this is what we call our IRCs, the industry related credentials.

And the things in yellow are the stuff that I'm doing with that now, and these are all cert different certifications. So they get first aid, CPR training. They get OSHA 10. They take the year one exam, and they do the work keys. You see the ACD national.

Now when you get a 5 or a 6, I believe that you get 3 general college credits for CCG. And if you get a 7, I believe you get 6 credits. So there's some other incentives there. The ones that I highlighted in green are ones that I'm working on more this year or ones that I want to add for the future. So that's just the I believe, there you did isn't that the one you just did?

No. What? Nope. For the heat pump training? I have not done that.

Oh, you haven't done that? No. So that's I thought we had a conversation about that one time. I thought we had a conversation about that one thing. I thought I was gonna.

Oh, you're gonna. Anyway, yeah. But, anyway, so that for research. Yeah. That's the one for research.

DPA 60. 608. 60. Have you done it? I did.

You did it years ago. Yeah. So it's I don't think it's a very hard training, and I think I could pull somebody in from the industry and have them do it here. You might be able to talk to a manufacturer and get them. Yeah.

I know that Green Mountain Electric often also Yep. Needs to run their supply. I did mine out of granite, and I think you have to use that. Yeah. I did mine out of granite, and I think you have to use that.

Yeah. Put it on. Right? You I did speak with somebody. I can't remember now who it was, like, somebody who's doing training in the state, and they combine a lot of the other things that I do, like, OSHA 10 and the CPR training.

You know, it's like a week long thing, and so I can have them just come in and do the part 608. So that's one. The National Center For Construction Education, also known as NCCER, is really an up and coming thing for Vermont. And what that is is it's a company that puts out these 2 books. I mean, it's lots of books, but for me, these are the 2 that I use.

And the core is basically Introduction to hand tools, power tools, drawings, communication skills, employability skills, and material handling. So there's 10 modules, but I only have to do 9 with one called basic, and that's not required. So I do all these little mini modules, and that gives them an IRC. And it's been a bit of work to put it all together because there's one company, Pearson, who does the book, and they have this whole online training platform. But the tasks are administered through NCCER, and so it looks like there's cost for both.

But it's what the state recommends as the tier 2 IRC, and that's really where we want all of our students to be at, is getting tier 2 IRCs. And the state has said that they want every program to get 2 tier 2 IRCs. So for me, it could be the core and the Vermont State apprenticeship exam level 1. If I can sneak in this electrical level 1, which is pretty much the same thing, I might do that at the same time because this has a lot of the same things, and you guys can pass this around as well. But it basically all this stuff that I have is all is all kind of the same thing.

It's just a little bit different. And sometimes I have a hard time just picking one and sticking with it. This the other thing is that for the state of Vermont electrician program, and, you can speak to this because you teach all the classes, is they have their own separate. They use Delmar and EWR. EWR.

So I don't know why they don't just switch to NCCER because the Vermont State Apprenticeship Plumbing Program does use NCCER. So they're getting it in the tech center and innovating as their adult education. So kind of that's where I've been focusing my my learning platform right now is using this material because it's recognized by the state. And so when they're done, they get the stuff that has center come in cost of the exams and I mean, it all it all comes out of my budget. Yeah.

So, you know, it's \$20 per student. They get unlimited testing, but it's not unlimited because after they failed 3 times, then they have to, like, wait a year to do it again. I've never gotten to that point where somebody failed it. I had somebody failed one one time, but, you know, we spent a lot of time going over it and stuff. So I I think the the team is good.

I think there's the stuff is there. But I've also been told the people who do this, they they talk about down in the south where if you get a job, you have your NCCDR electrical one, you automatically get, like, 2 or \$3 more an hour of food. You know, people here, they never heard of NCCDR, let alone, like, give you a bump in pay because we can prove that you're not But I think there's some value to it. It's also it gives me a chance to say, okay. You know?

Here is module 1. You know, work through x, y, and z on your own. We'll come back together, and so it gives me, something for them to do where I don't always have to be standing up here and talking to them because after about 15 minutes, they don't wanna hear about it anymore. Were there a digital component online? There is.

Yeah. And so, basically, they've taken the whole book, and they they they've made this great PowerPoint. It's not even a PowerPoint. It's more like an interactive where somebody, like, gives it to you. And so little boxes will pop up.

You have to, like, you know, if you're doing safety harnesses, you have to, like, show up to the to some parts of the where the key bin goes and how to hook it to the Speaking of which, I need do you have any old junky, harnesses that I could use for administration? So so that's kinda where I'm at. You're in the copy of my curriculum map, but it hasn't really changed much from last year. So I got my curriculum map. These are kind of the units that I cover, which is based off of the information in those packets that the state wants me to teach.

Does my hold for them? Or do you Yeah. Do you use my hold for them? I do. So I still use my hold.

My hold has the PowerPoint presentations that take the stuff in the code book, and they put it into pictures. And it's not always the best. I mean, the thing is if you go through one article and it doesn't have all of the stuff from the article, he, like, picks out the stuff they feel is the most important out of that article and concentrates on that. The other thing is, you know, my program is really for supposed to be just residential because that's what you learn in your 1st year of apprenticeship. But the Michael stuff in the code book goes way beyond just residential.

So there's a lot of other stuff that I do with them, that they're getting but don't necessarily need for this program. Oh, great. So that's that. And so then the other part really is just, you know, making sure that I'm I've got the right for it to ongoing. Got good material.

I'm always adding to my tool selection. As you can see, I invested in that big tool cabinet thing, at the end of the school year last year. I'm always collecting new tools, trying to keep it, cleaned up, and getting rid of some of the older stuff that I had acquired when I started. If you remember last year, I had kind of oval shape of workstations here that, you know, the students that sat on this side could never see the board. And so I got these desks, which they're not perfect, but it gets everybody in front of me so that they can see the board because I do a lot of my work up here.

And, and we built a different size structure this year. It's much narrower, but quite a bit longer, and we kinda built 3 rooms to it. And it was a fun project to do. The students really like building it and having some input on on what it's gonna look like. The next big big thing I wanna build, and I'm actually working with Chris, hopefully, once his light comes down, in January, is I wanna build a training structure outside my door.

Similar to what you guys have about the VTC, the roof structure, that is how the the the house that we call out. Yeah. And so I bought 2 kind of, smallish off grid power setups from Amazon. Maybe not the best choice in products, but what it was is I've got a bunch of those, solar panels back there. It came with an inverter, a couple of, batteries, and came with a wind turbine and some wiring, basically, like, I don't know, maybe a 24 100 watt setup or something.

So what I wanna do is I wanna create a training thing outside that students can build and pick apart year after year. And so figuring out how to set up the charge controller and stuff inside so it's done in a safe way that students can work with it, maybe putting some, like, permanently not disconnect outside and on the side of the building and then typing in through the wall, and that would stay. But the students could then pull the wires out when we're done with it, and then they could learn, you know, at the beginning of their, like, this is how you push a fish tape through conduit, and this is how you pull fire in and have it set up. You know? I have a bunch of access to some, unused solar routing.

Yeah. Were in less than any of that. Well, I was just gonna invest in a bunch of, Unistra and Distilled Back Unistra, but if you had some kind of racking. Now I don't know what it's gonna look like yet. When I talked to the maintenance department, they weren't overly excited about putting in something permanent.

So I was thinking about making some smaller, like, 6 by 6 pressure treated skids with a frame on it, and they could be dragged, you know, out back with the bag has a new tractor. But, you know, the south is

right here. So right outside my door, there's a perfect southern exposure right there, and we could set up a little bit of stuff. And it's right outside the door. I have some stuff taped inside.

So that's kinda one of the big things. We've been working with the Bernie Sanders administration, and they really have, like, a whole bunch of money to dump into solar training. And so, our director is really pushing to get to do something with that. And, you know, as we work on this, maybe you guys have some ideas on how to do that training. You know, I've had students working at Chris' business and, you know, I don't know exactly what the growth is there, but it seems like they're always willing to take people.

So that's nice. Appreciate that. Let's see. What else did I have on my list? So, yeah, reviewed the IRCs and CCR stuff.

One of the things that, some of the more established programs have here is they have electrical based scholarships, and this program is fairly new here. I think this is maybe the 5th year. Yeah. About the 5th year. And so I wanted to throw it out to my advisory board about, doing some kind of a electrical scholarship.

And there's different ways that you can word it, and however much it would be, but I would be nice at the end of the year. We give out a lot of money for scholarships for students who aren't necessarily going to college, who are going to college, or doing something in their field. And so that's something that I think that would be valuable for for my program. I mean, I don't necessarily see that a lot of kids from your program are gonna take the college route. Yeah.

So maybe rather than a scholarship, it's a nice set of hand tools. Yeah. Exactly. Or some kind of, you know, I'm just sorting that a number out there, but, like, a \$500 check to buy yourself a tool belt with some hand tools. Sure.

As long as maybe you're I mean, I don't wanna just give money away because That's what I was saying. Put together a nice line. Right. So as a group, you know, as the year goes on, and maybe this is something you guys can think about now and when we come back in the spring, we'll have to do another, you know, get a new place here. Something that we can as the school year starts to end up closed down that we could maybe figure out a way to, you know, maybe unlock the green mount electrical supply, and see if, you know, if they can do something with us.

So that was the other big thing I want to figure out something to do to move forward with my program is to have some kind of nice little scholarship for a student who seems like they're gonna stay in the trade. And I think that would help other students, you know, like a junior or something and be like, oh, look. If I stay with this, I'm gonna get a nice school set up. And then just, keeping on your radar for guest speakers and field trips. You know, I know you guys have lots of solar fields.

You you made a time, and I can get. Know? You you're not the thing. You put the wires in. You know?

There's not a lot to it. You know? You you mount the thing, you put the wires in. You know? There's not a lot to it.

But I feel like there's, one of the things I wanna buy for my program is just some kind of a wall charger pack and have students practice, you know, setting it up. Maybe if it's running some 16, Maybe if it's running some 16 room x over to an outlet, you know, and doing that kind of stuff. Level 2. Yeah. Like a level 2 home a lot of that.

Yeah. And so, you know, some other things like that, if if there's things you can think of, you know, even if I got a knee split, even if it didn't run-in here, just this is how you mount the, condenser car outside and come it through, and this is how you can hang it on the wall, you know, and and maybe out of it the vacuum and pump it down and stuff. I mean, you could run it in here, but it's not a huge thing, but I feel like it's stuff that they're gonna see in the future. I'm sure. And then so that was that.

I'm going to probably I'm gonna type this all up into notes, but, you know, these are the questions that we had last time. How can we better train our students to meet our industry needs, employment projections. I mean, we all know that there's not gonna be a lack of need for this in the future. Anything you can think of off the top of your head that will make the program better? That's one of the questions I raised in thinking of.

During the last year, in January, you switched. Yeah. Did you guys So, unfortunately, the school won't let us get involved in many projects due to insurance reasons. We did walk over a few times at different parts of the fixing of it and just kind of watch them and ask them questions. Mhmm.

But it's, unfortunately, not allowed to really get help in anything. Yeah. Yeah. Step for a couple \$100, it may get a fun thing to it. Yeah.

I mean, was it in the core here? Yeah. That makes a modern setup. I know. I think after your recommendations, I bought this, and I haven't had a chance to use it.

This might be what you're buying. Pretty sure it is. I'm not buying. Pretty sure it is. Yeah.

There's a little CD there. Yeah. So I bought this little here. That's it. Exactly.

And I, took your advice, although I haven't gotten it hooked up yet. But there is a couple of big electrical panels right here at the end of the hallway, and that was my thinking is to see if I could get, the school

district uses Harmony Electric. And so some people are in here doing stuff, maybe they can throw it in for me. The biggest thing is getting IT to somehow get it onto the school network. But then I was wondering if I just brought in my own little personal router.

I wonder if it would just connect to that. I mean, I don't really need an Internet connection. Right? I just need some Wi Fi. Bluetooth.

You would need Yeah. Like, everything. I think any global it'll connect to any local area now. Or Yeah. So, yeah, that was I did take that advice from the last year.

So I have this stuff. Cool. I mean, you could even just put some of, you know, typical loads in here and monitor individual loads, get a deal for, you know, what it looks like. Yep. And that is one project we do.

I have, we build kind of a pretend overhead service and an underground service. Yeah. But I got 2 meters, the digital and the analog one. And so we, 1 year, hooked up, like, 6 LED light bulbs for one side and 250 watt incandescent bulbs on the other side. And every day, we run them for the same amount of time.

And then after, I don't know, like, 30 hours or something, we compared what the readings on each meter said, which led to a good discussion as to why we use LED bulbs and and stuff like that. So that is a pretty effective visual thing that they can actually see. Mhmm. And, I mean, something like that if you were to build a little solar array that you're talking about to monitor the output of that. Because if they're gonna get into that field, that's a huge part of the job.

Yep. Yeah. That I mean, I don't know how much wind we actually get here. It's probably the most use of it, but it started to hit you never know what people are gonna see these days. You know?

Mhmm. Is it a tough time? Yeah. Do any of your students work at home? So, actually, yes.

I have a former student who graduated last year. Mhmm. He went to work there this at the end of the summer, which was a really great thing because I've been talking with him a lot about dating some students there. We had a had a student that didn't work out well and kind of turn them off from the idea. As you know, it's it's hard to have students working with you when you're busy and trying to get stuff done.

But he finally, gave in and hired him. So that was really nice to have that. I feel like a lot of these questions aren't really pertinent this year or this round because we've discussed them in the last meeting. Like, is my curriculum up to date? Am I teaching the right things?

Basically, I teach to what the state tells me I should be teaching for my program. So it's always gonna be up to date. And once we see things that we feel like we should push back to the state on and say, hey. You know, this isn't relevant anymore, or maybe we should add this. But it really follows what what you're teaching at the adult education level for the apprentices.

Yeah. Same test. I think you hit all of those same events. I mean, I'll just say, observantly, you seem way more organized in the last 2 years versus, like, you're so much better organized here. Like Yes.

Getting better. Yeah. That does mark improvement. I thought I thought it was bad. No.

I didn't wanna imply that. Oh, thank you. Yeah. Yeah. I really tried to really hone in on everything and, really, I'd like to get my numbers up.

That's kinda gonna be my big thing for for next year is making sure that I can get more out of my 10 is a good number for me. 16 is is our max, but, you know, when when I get these years of, like, 3 juniors coming up to seniors, you know, if I could get a full class, that's 13. It's it's hard for me to take 13 students out to see stuff. 5 is nice because I can put them in one vehicle. That's kind of a cutoff of what we can have.

So I'm hoping this year, at least 3 juniors, that I can go out and see more job sites. You know, I'd like to get to a local wind farm or Sears Bar and all those. Go down and visit, Elaine Durfee on the hydroelectric dam right in Bethel and have him show us that. You'll see some of your guys' big solar fields, that kind of stuff. Yeah.

We have one right on Route 14. It's a different farm set. Yep. 500 k w. It's not under construction.

It's still Yeah. You have one on the other end of the 14 w or was the company you serve? Used to work. Yeah. So I could I could make that happen.

Yeah. And then, some other ideas I had is we're going up to hopefully beta technologies. They came here and did a big thing that they have this roving, airstream that has almost a complete cockpit built into the back of it. And so you get in, you can fly it around. I mean, it's just like you're flying.

Make sure that you do that after you visit our site. No. That's already. I'll get that shit. And there's a a guy I just talked with who works for a company called Core, o r e Yeah.

And something that's affiliated with it, like, Nomad. Nomad. Yeah. Chris Chris McKay. Alex?

Alex. Yeah. They're at work. Perkins. Yeah.

It's Perkins. You both Perkins. Some of those. So, I'm hoping to do some stuff with them this maybe in January. Yeah.

I think, I mean, like, the. Great. And so I'm trying to expose them to stuff more than just residential electrical. Not not that you get residential electrical. I did it for years myself, but I just want them to know that the electrical world is much more vast than being just your average electrician.

Yeah. I think I mentioned it last time here here that the more you can expose them to, the better. Yeah. Yeah. Yeah.

Do you guys use use my 3 Powerwalls and stuff? Yeah. Yeah. I mean, that was pretty good. Jason, everything.

We can do Powerwalls. I don't know if you do any Powerwalls or anything Yeah. It's a lot of problems, a lot of drama, but regardless of the drama, it's like a lot of the work they're doing is power oil installation. Yeah. I feel like that's gonna be a big thing.

You ever get one that's blown up or something and you don't send it back? I may ask them back. Yeah. It's already. Yeah.

They don't blow up. Yeah. Everything's great. Well, you don't know who's gonna be in power tomorrow. Elon's great.

So that's I mean, that's really kind of that was the bulk of what I had planned for tonight. Oh, yeah. Another thing for real trips is that you're walking to college Oh, yes. To college. Because you gave your tribe or tri nature days.

Is that Yeah. Last year? It was. And, you know, I went and visited the electrical program, but maybe I should have gotten done remote water instead. But, yeah, but I didn't really have to anyway.

Yeah. Yeah. So, yeah, that would be great is to combine maybe the amount of data that you're actually, like, doing some kind of a lab or something, you know, love to see actual stuff happening. Yeah. The Tri Nature Day is good.

Yeah. It's kind of meant to be, like, a small, you know, project. Yeah. Usually, the solar panels that you can play around. Yeah.

In the morning, you know, I found I'm already having a couple of students who are like, well, maybe I maybe I'll think about college. You know? So it's like, you know, as I tell them my story, you know, I I went through the trades and I went to VTC in my early thirties. You know? I got my associate's degree, got my bachelor's degree.

So I tell them, you know, it doesn't matter what point in life you're at. If you wanna go to college, go to college. You know? You can never be too old. Mhmm.

So it's always good to have that connection. Yeah. And I I think just emphasizing that little mortgage on that option. Yeah. You know, without the math, they don't really have the option to get into the colleges right away.

Yeah. Take that off. We have a new, mock teacher, Minh Q, and she is really sharp. She's been a math teacher for 25 years. She's never worked in this setting, so that's been a new adjustment for her.

But I think the students seem to really like her, and I I I have students come back from her class, and they'll get down and get to work on their homework. You know? Because they're like, oh, I understand it now. You know? So that's that's been really encouraging for me.

That's great. But then I have the others who just, you know, they'll never get it. They don't wanna get it. So but, yeah, that's, something we're working for. Other than that, though, you know, we'll, I'll reach back out probably April.

You know, if you know of somebody else who might be interested in joining the advisory board, let me know. This is like a minimum that I'm supposed to have. So if I had a couple more, that would be good. But, please reach out if you can think of anything between now and then. You know, if you hear something coming up, that would be you think my students like my life easier.

I will Yep. I guess and I also have some former students that are working to be coming up the Yeah. Okay. The breweries are putting them. And I can't remember which one and where, but, I think in the area, it probably has some diagnosis.

Information. Okay. That'd be great. Well, as always, thank you very much for your time. I really appreciate it.

Thank you. Yeah. Yeah. We can have a little snack on before Yeah. Of course.

I gotta run. I'm gonna sit up this couple of days. Yeah. It's great to have that. Yeah.

Because, it's a long day. It is a long day. Yeah. I wonder if it's a I really was disappointed with my technology