

Foresight: The CPA Podcast

Season 5 Episode 2: Should accounting be part of STEM?

Neil Morrison: Welcome to Foresight: The CPA Podcast. I'm Neil Morrison. When we were researching stories for this season, I was struck by an article in *Politico*, that's the Washington-based politics and policy newspaper, and across the top of one page was the headline, "Seven Reasons Why Accounting Should Join the Other Tech Professions as a STEM Field." It's a full-page article, and it's heavy on graphic design, and it is sponsored content from the Association of International Certified Professional Accountants. And that made it even more interesting.

It'd be one thing. If a journalist or a columnist was pushing this idea, that would be interesting, but it'd be more of a think-piece, not necessarily a sign of the future direction of the profession. But this is coming from one of the most prominent accounting organizations in the world. And it ends with this call to action "We are calling on Congress," that's the U.S. Congress, "to enact legislation recognizing accounting as a STEM field." This is no think-piece. This is a campaign. This is an accounting body with 696,000 members, students and professionals globally, promoting a serious rethink of the profession.

Now, that's something worth exploring. Jan Taylor is the academic in residence and the senior director for academic and student engagement at AICPA, and we caught up with her at her home in Houston, Texas. So Jan, tell me why is recognizing accounting as a STEM subject so important to the future of the profession?

Jan Taylor: Well, I think because, right off the bat, we think accounting is technology, and of course, T within the S-T-E-M of STEM is technology. And we have had so many advances in technology that you think about artificial intelligence, robotics, data analytics, cybersecurity, blockchain, IT auditing, IT governance, just technology essentially permeates every single service that accountants deliver. We certainly are a profession that is dependent upon technology, but we're also a profession that influences and innovates within technology-

Neil Morrison: Tell me about that.

Jan Taylor: -so I think it's really important.

Neil Morrison: Tell me about that, because a lot of fields use technology or are technology dependent.

Jan Taylor: Sure. Yep, yep.

Neil Morrison: But I would think to be part of STEM, you need to be more than just dependent on technology. I mean, if you think about film studies, it's dependent on technology.

Jan Taylor: Oh, absolutely, yes.

Neil Morrison: So what is it about the technology? There's got to be something more than that.

Jan Taylor: Right. So within a lot of public accounting firms, for instance, they develop their own proprietary software that they then use to provide their client services. We also think about the fact that they have to be in conversations with their clients and telling their clients, “This is the type of information we need, and we need your systems to be able to provide that information,” or “There’s a better way that your system can do this, that would provide you with cost savings, a more effective and efficient way of gathering, providing, sourcing that data, and analyzing that data.” So as IT consultants within the firms, all of our big clients that we have out there, certainly the clients of the big four public accounting firms, if they’re a public company, they’re going to have an IT auditor on that engagement. So someone who is there looking and able to understand that client’s system, understand how information flows through that system.

So that goes way beyond just using, it’s not just pull up an Excel spreadsheet and use Excel or pull up any of the other types of software that are out there, IDEA or Alteryx or those types of data analytics software, or even Power BI. All of those are wonderful tools, and yes, we use them, but we go beyond just the use of technology to the point. As I said, it’s not always that we are the ones in there doing the coding, but we’re the ones influencing the coding. But we’re also teaching some subjects like R and Python and things to accounting students across the country in order to help them truly understand how certain data is analyzed using those software tools.

Neil Morrison: And we’ve talked with people on this podcast, firms, that it’s a big part of what they do is actually developing software. So they work with a client, the client’s system, cloud system doesn’t work well with their own accounting system. So they’re creating the actual programs that link them up or helping them develop systems. We spoke with one person who a large part of their business is actually developing software, accounting software, bespoke software for their clients so that it lines up. I guess that’s part of it as well.

Jan Taylor: Absolutely. And that is what we are trying to get that word out, that this is not your parents’ accounting profession anymore. When I started, we were just getting into the computer age of accounting, if you will. I do remember doing some manual books back in the day. So we’ve come a long way over the last, certainly, 30-40 years, and the technology just continues to grow.

Neil Morrison: So critics might argue that accounting does not incorporate enough hard science. I’m thinking chemistry or physics to be categorized as a STEM field. How would you respond to that?

Jan Taylor: Well, that’s in the S, right-

Neil Morrison: Right.

Jan Taylor: -of STEM. Now, engineering doesn’t necessarily incorporate some of those hard sciences. Certainly, there are physics and things that go into engineering, nor does mathematics for that point. So I would say that I think technology stands on its own as part of STEM. We could have even said mathematics given the numbers and the things that go into it, but we don’t really, as accountants, we’re not out doing differential equations and calculus on a day-to-day basis. We are influencing technology on a day-to-day basis. We are using technology. We are innovating technology on a day-to-day basis. So we truly do feel like it belongs under the T in the STEM field umbrella, if you will.

Neil Morrison: That's an interesting distinction because, like you said, you are not actually driving the field of mathematics. There aren't new mathematical formulas or discoveries that are coming out, but you are in fact driving the field of technology, and you are in fact-

Jan Taylor: Absolutely.

Neil Morrison: ... driving innovation. And in fact, you're also, as you said, creating it. So that's why it fits more in the technology field.

Jan Taylor: Absolutely.

Neil Morrison: It's important to understand something about the way grant dollars for education are allocated in the U.S. Federal legislation allocates special funding for STEM subjects taught in kindergarten to grade 12. If Congress passes a bill recognizing accounting as part of STEM, then the field gets access to some of that funding. And Jan says that matters because it's an opportunity.

Jan Taylor: To share that message with those probably middle- and high-schoolers to let them know that it is not what is portrayed in the media. We're not counting beans anymore or pushing that pencil in a corner by ourselves. So that's probably one of the key benefits for the federal legislation passage.

Neil Morrison: There's another piece to this push at the federal level for recognition as part of STEM. The Department of Homeland Security has a list of approved STEM programs. Those that are on the list have a significant advantage when it comes to recruiting students.

Jan Taylor: If we could get accounting added to that listing, it allows those accounting programs throughout the U.S. at the higher education level to recruit international students to come into their programs. And when they graduate from those STEM-approved programs and enter into a STEM field, so they graduate from accounting and they go into the accounting profession, those international students are provided an extension to their one-year work visa. Essentially, they get an additional two years. So it allows that international student to stay and work in the U.S. for three years, and that's a huge benefit for those students. Plus, it would also allow those programs to advertise themselves as a STEM field to promote themselves on campus as a STEM program, I should say. And that can help to bring more folks into the profession, which we need right now, by the way.

Neil Morrison: Let's look at that. What do you think being part of STEM signals to either newer members of the profession or people who are considering it, or I guess more importantly, people who have not been considering it, what do you think being part of STEM signals to them?

Jan Taylor: That's a really good question. I know that if you talk to counselors at the high school space, there is a huge focus on STEM pushing the kids to consider majoring in STEM subjects. And I think part of that has to do with the fact that we do need more people entering into the sciences, and then we need more engineers. We need more thought-provoking mathematicians, and we need more people entering into the technology fields. And I think, to be honest, again, and maybe it's my own bias, but not to disparage the others, but we know that technology is just going to continue to expand and grow. So I think we need people who, in the financial fields, have that expertise to be able to look at how artificial

intelligence, for instance, can help us, but also how it can hurt us in providing accurate, complete, verified information for our people to make decisions about their finances. And that's huge.

Neil Morrison: So if I'm someone who hasn't really been thinking of accounting, if I find out that it's part of STEM, what effect would that have on me? Is the thinking here that maybe I would turn my mind to it, whereas previously I would've just dismissed it?

Jan Taylor: I think that is part of it, yes, because the kids are being told that it's important to go into a STEM program, to think about majoring in a STEM subject that clearly... As I say, I love the idea of promoting accounting and encouraging people to major in accounting, I think it's a career with so many opportunities, but yeah, that kid that wants to be an elementary school teacher. Yeah. That's not who we're really, I'm not interested in trying to change their mind and doing that. But I think by having accounting as part of STEM, for those who are looking at those STEM fields, they may not have considered accounting as one of the fields that they would be interested in because it has not, to date, been promoted with any type of, I guess, official seal of approval. It has not been recognized as a STEM subject.

Neil Morrison: So I guess, in that way, it may have the effect of attracting new kinds of students, maybe people who wouldn't have considered it previously. And in that way, diversify the pool of people who start looking at it.

Jan Taylor: Oh, absolutely.

Neil Morrison: How important is it for the future of the profession to diversify?

Jan Taylor: We think that it's extremely important. I mean, for one thing, we have different thoughts. We have different ideas. We have different upbringings. And diversification, when we talk about that, that can mean so many different things. It can mean ethnic diversity, it can mean gender diversity. It can mean so many other things. But I think we need voices in the room that are different from ours, that they have a lived experience different from mine because if it's me and someone who's just like me and someone else who's just like me, and we all have that very common lived experience, that we're not bringing much innovation to our thought processes because I know that when I am with a diverse group of people that the conversation is different than when I'm with a homogenous group of people that I feel like we all have a very common history or background. So I just believe that the diversification can help us grow the profession beyond just numbers, but grow it in the sense of the innovation that we were talking about earlier and the ideas that might be brought up that might otherwise have not been.

Neil Morrison: If this is successful and it is recognized as part of STEM, will this move it away from its traditional home in business schools? I'm thinking of when I go to a campus right now, university campus, you have all the STEM subjects in the buildings, kind of one part of the campus, and then you have the business school, and the accounting is usually tucked away in the business school. So will it move it away from that traditional home?

Jan Taylor: I would hope not. I think accounting is definitely... Okay. Again, my bias is going to show here. Yeah, it is the core of business. Most businesses are there for a purpose, and certainly those for-

profit businesses are there for the purpose of generating wealth for the owners of that business. And so, having accounting taken away from a business school doesn't make sense to me. I think what we need to recognize is that business has changed, and that change is primarily in the area of technology and how technology has influenced business. And so, I personally don't see that happening. A lot of schools, they have their Department of Mathematics over here, in one area. They have their engineering schools, over here in another area. They have their physical sciences. And so, it hasn't happened yet. I don't foresee it.

Neil Morrison: You don't see it that it becomes unmoored in any way from its place?

Jan Taylor: I would not think so.

Neil Morrison: Will it change the curriculum for accounting degrees?

Jan Taylor: It already has. Yeah. The accounting curriculums across the country are embedded now with analytics and data analytics and using the technologies, as I've just mentioned, to show the students how to do that. I know the university that I taught at prior to coming to the AICPA and CIMA was, we've had an IT audit course there for years, and it continues to be. I taught blockchain, I taught cybersecurity, I taught a lot of these things in my graduate courses in financial accounting because that's how financial accounting is being protected on one hand and being developed and disseminated on another. So all of these kinds of things are already in there.

And as I mentioned, some faculty are going and they're having kids write bots. They're having them use R, the programming language. They're having them use Python. They are doing a lot of different things to analyze data as primarily and analyze financial data primarily. So I think that the recognition is coming behind what's already happening, because that's why I said accounting is STEM, whether it has a formal recognition by the U.S. government or not, I truly think that we are a technology field.

Neil Morrison: Right. So naming it STEM is not going to drive the change of the curriculum. The change of the curriculum is what's driving the need to have it recognized as STEM.

Jan Taylor: Absolutely.

Neil Morrison: What kind of opposition, if any, have you encountered in your push to have accounting recognized as STEM?

Jan Taylor: I don't think that we actually have opposition. We have indifference.

Neil Morrison: Oh, interesting. Tell me about that.

Jan Taylor: Just people that, especially at the congressional level, it is that they're more interested in this area and legislating in this area and making sure that this gets done. And I want to say it's not complete indifference. Obviously, we have had representatives and senators who have proposed this legislation. It's not that people go, "Oh, no, accounting is not STEM." It's just that, "Well, okay, but this is more important to me right now."

Neil Morrison: Right. I've got something else. There's something else that's blinking on my radar screen right now.

Jan Taylor: Exactly.

Neil Morrison: The red light. But for the profession, how much is at stake here in this drive for recognition as part of STEM?

Jan Taylor: I think in terms of attracting those students who are interested maybe in business, who are interested or, in a STEM career, that we could attract more to this profession. And we need to do that again. We have a shortage right now of students that are majoring in accounting, going on and then entering into the profession. And of course, of those students majoring in accounting, a large number of them don't enter public accounting. And so, we have a smaller pool going into public accounting. And then of those, you've got a smaller pool that are going into the audit profession. And when you think about the protection of our capital markets, the audit of those publicly traded companies is paramount. It is the way we make sure that there is integrity in the financial reporting process. So I think being able... Anything that we can do that would help people who might not have otherwise thought about accounting - help put it on their radar, that's a good thing. And I definitely believe that having accounting recognized as STEM would do that.

Neil Morrison: I really appreciate this. It has been a great conversation. Thank you so much for talking to me.

Jan Taylor: Oh, absolutely. I love talking about this stuff, and happy to chat with anyone in your audience that would like to talk to me about it. Delighted to have that conversation.

Neil Morrison: Wonderful. Thanks so much, Jan.

Jan Taylor: Thank you.

Neil Morrison: Jan Taylor is the academic in residence and the senior director for academic and student engagement at AICPA. On our next episode, we are speaking with Liane Davey. She's a team effectiveness advisor and the author of *The Good Fight*. And we are going to speak to her about the rise of polarization in the workplace. As this trend continues, CPAs are going to need to be more skilled at managing conflict at work. It's such an essential skill that conflict management is identified as a competency in the new foundational common core listed in the CPA Competency Map 2.0. Liane gives some really practical tips on working through conflict and she says one of the keys is being able to spot unhealthy conflict.

Liane Davey: Unhealthy conflict is like friction, like a blister. So it's just rubbing. It's slowing us down, it's not getting any better, it's not productive, we're not getting anywhere. It's becoming personal, we're not listening, we're not, no one is changing their perspective or their position after somebody else talks, we're just retrenching and digging in. That's the blister form, and there's nothing good about a blister.

Neil Morrison: That's Liane Davey, the author of *The Good Fight*. She is on our next episode in two weeks.

And that's it for this episode of Foresight: The CPA Podcast. If you like what you heard, please give us a five-star rating or review wherever you get your podcasts and share it through your networks. It all really helps. Foresight is produced for CPA Canada by PodCraft Productions. And please note the views expressed by our guests are theirs alone and do not necessarily reflect the views of CPA Canada. Thanks so much for listening. I'm Neil Morrison.

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