

Teaching in the Time of Coronavirus: A Conversation with a Chemistry and Physics Teacher in Iowa

In this blog series, our Vice President of Programs, Jeff Rozelle, is talking with teachers around the country about their lives during this pandemic. They'll talk about what teaching entails in this new world, how their students are managing, and the unexpected challenges and successes they find. This interview was conducted on April 21, 2020 and has been edited for clarity and length. Click [here](#) to see the other interviews in this series.

Dan Voss teaches chemistry and physics at Dallas Center-Grimes High School in Grimes, Iowa. He's a fourth-year teacher and 2016 Knowles Teaching Fellow.

Jeff: What did yesterday look like for you?

Dan: (Laughs) Oh boy. That's such an interesting question in this time because, compared to a normal day when you've got the structure of a routine, it's hard to remember the structure of every day.

Yesterday, I woke up and checked my email right away. I'm a volunteer with Engineers Without Borders, USA, which partners with communities in developing countries. I'm their lead education volunteer, so through the last couple of weeks I've been doing quite a bit of work related to their COVID-19 response. We're developing a handbook of handwashing station designs that can be quickly put together in places where there's not flowing water, so I was checking on the status of that.

For school, now we're on what's called Voluntary Educational Enrichment Opportunities (VEEO) because even in a crisis acronyms are very important (laughs). My school's interpretation of this means that each week the high school core teachers—science, math, social studies, and English—are supposed to send out to all their students 45–75 minutes worth of work for the week that students can choose to do or not. When students turn the assignments in to us, we have to acknowledge them, but don't necessarily have to give feedback. It's just something to keep their minds working, and it has to align to state standards. So yesterday, I sent out those VEEO emails, and I contacted my advisory students. I actually have a new student who just came into the district. How fascinating would it be to be in their shoes? So I contacted that individual and just said, "Hey, I know this is weird, but here's who I am. Please tell me a bit about yourself."

Then in the afternoon I did a little bit more work for Engineers Without Borders, I did some professional reading as well, and in the evening I spent a little bit of time with my wife and watched The West Wing.

Can you tell me more about the Voluntary Educational Enrichment Opportunities? Is it a state-wide thing or something your district adopted?

It's been really interesting through all this because Iowa does have a strong tradition and belief in local control. I'll tell you how all of this has evolved, because we've had a lot of different things happening, lots of slight changes and adjustments.

March 12th was my school's last day before spring break, and at the time we had just gotten word that Des Moines Public Schools, the largest district in the state, was calling off the next two or three weeks. At that point, the governor hadn't said anything like that. We also were hearing that our superintendent was talking to other area superintendents about what we were going to do. Early the next week, the state legislature stayed late one night and worked together on a deal that canceled school until April 13th, and it said that we wouldn't have to make those days up. This was going on in the middle of our spring break. It was really bizarre.

I was already starting to strategize for what comes after, playing through different scenarios. What are some different types of things that could happen? What if they extend beyond April 13? What if we're made to go to some sort of online learning? I started planning for when we "got back" from spring break, so my students would start to see content posted from me.

And then we got word that we were not to contact students in any way, and we had a couple of weeks in there where we were not allowed to contact any students. We were supposed to just allow the district to handle all the communications because they wanted a consistent message. As April 13th approached, the governor declared that we were extending no school until April 30th, but starting on April 13th, in order to not have to make the days up later, we had to provide something in terms of educational opportunities. They gave districts options: they could choose to require students to engage in the instruction that's supposed to be comparable to a typical school day, and I know

some schools are doing this. Or there's this voluntary option, and schools are supposed to be providing, at least, things posted online that parents and students can look at, which is what my school did.

This keeps changing. Now, teachers can be in contact with their classes and post assignments and, because those days count, it has to be directly tied to standards. I'm not entirely sure which parts of it are imposed by my district versus by the state, but our expectations now are that we post assignments by certain times each week on Monday, and it's supposed to be 45-75 minutes per week. At the high school, it's only the core subjects.

So this week, what does your 45-75-minute opportunity include?

For chemistry, we've been developing this as a team among the three chemistry teachers. Last week, students got a chocolate chip cookie recipe in moles of each ingredient, and they had to convert it into measurable units, and if they wished, they could bake that into cookies. Participation for that was actually pretty high! We'll see if it's at the same level this week, because it's just some stoichiometry practice, still using the cookie example but with no actual cookies in the end.

I am the only teacher for physics and AP Physics in my school, so I have more freedom to choose my VEEQ. I'm really trying to think about what students might want to do, and then I'll make it work with the standard later. For this week, I put together some materials from different online resources I found—news articles, some different maps, a podcast from a couple of months ago—and the ultimate question is, "Is coronavirus caused by the 5G towers?" I've seen the news reports about how **some people have been burning these towers down**, and depending on the types of social media students are engaged in, they might have heard different things about this. So I have them investigating this question. The answer of course is, "No."

And you are able to map that on to a standard?

Yes, there is a standard that actually focuses on the effects of electromagnetic radiation on people, so that one was easy to map. But now that we also know that we aren't going back to school this year, I'm more focused on finding something my students will want to do, than I am mapping out specific standards.

Are you interacting with your students now? How are they doing?

It's been very bizarre, because like I said, for the first couple of weeks we weren't allowed to contact students at all. Then we were only allowed to contact our advisories. When I emailed those students I pushed to know, "Please, if you've got some time to respond I'm curious about how you're doing." I've been in touch with over half of those advisory students. And one week into the voluntary online learning for my chemistry and physics classes, I've had some sort of contact with maybe 10-20% of my students.

I think where Iowa stands right now, much of the coronavirus transmission is among medical personnel, and in nursing homes or meat packing plants where people are close together. So from a health perspective, I think my students have been pretty isolated from it which is good. I'm actually in the process of just individually emailing each student to try to get a better sense of how they are doing.

We're not allowed, in terms of student contact, to do any sort of video thing, at least at this time, and not much rationale has been given for that. But that's made it difficult because I'm working with this student right now struggling with an assignment and it's hard to help by email. Students aren't used to primarily communicating through email, and it's not something I've done a good job of working with them on. It's a struggle.

I can imagine stoichiometry would be tough to explain over email.

Absolutely. I'm grateful all my students have smartphones, and to the best of my knowledge, internet access through those smartphones. But we're really not even sure about that. We only asked about a week and a half ago who has the internet at home so we're still trying to figure that out. But if you just have access through your phone, or you don't have access to a printer, then the stoichiometry is going to be super painful.

I'm sure you've talked with other teachers in other states, whose schools and districts are tackling this challenge differently. What are your thoughts on those differences?

I do appreciate the approach that Iowa and my district are taking in that I am very glad that we were not made to do an immediate turnaround where they said, "OK, everyone. No school tomorrow. Have something online. Go!" I am grateful that we aren't doing live instruction because with everything I've read that that

isn't the best option for many students, and I can't even imagine trying to keep students engaged on five hours of video calls a day.

But I do certainly wish that what we were doing was mandatory for students. First, it would really force us to consider equity more carefully. Right now we don't even entirely know who has internet access. I know special education and ELL teachers are working behind the scenes for students a little, but we're not doing as much to offer those services as we probably could. Second, if we had mandatory instruction, we would have a better sense from students who aren't responding if something is wrong. Right now, students aren't responding and we don't know what it means. I've got a senior physics class—I don't blame them if they don't want to do the optional stuff. I probably wouldn't, unless I was going into a career that required it. The grade is set. But, if it was mandatory you'd hear from those students and we'd realize, "Wait, no one has heard from this student and it's been two or three weeks, so we need to start checking up on them more." My students are a reasonably privileged population, but there are students for whom their home is probably not the best place for them, and I do worry with the way things are right now that we don't know what's going on in their lives and if they need more help than they're getting. I would love to have more interactions with students. I'm not sure I'd honestly produce that much more content or assign much more than I am right now, but just to be able to have the time when they could call in and just chat or give students the option to get together as classes. I think those could be really valuable experiences that just can't happen right now, or aren't being allowed to happen.

My primary frustration through this whole process has been that all the decisions are being made very far away from the classroom. There was a very big gap where students weren't hearing from their teachers. This was also a time when students were starting to hear lots of things coming from certain media sources and politicians about "Oh, this isn't that bad. We don't need to shut down. It's taken care of, and this will all be over very soon. We'll be back by Easter!" And I regret that teachers were not allowed to serve as a voice in that time to counter some of that, but also just comfort students and check in to see if they were okay. Parents were receiving plenty of communications from districts, but not too many of the teachers I knew were allowed to check in with students the way teachers should be allowed to. This is a human crisis, people are suffering, people are dying, people are scared, even people whose families are not affected by the

disease directly. You've got a kid sitting at home, and all they're hearing is the echo chamber of their friends on social media. It's really important that in times like this that we put the teachers and other people on the ground who have carefully crafted relationships and strategies in contact with students. And I regret that that's not really how things are working in my state.