

Buswell, N. T. (2017). Narrative 2: Valerie Michaels. In *Swimming upstream: Pathways of new engineering faculty at non-R1 institutions* (Doctoral dissertation). Pages 120 – 127.

Narrative 2: Valerie Michaels

Valerie Michaels is an assistant professor at Current Institution, a Baccalaureate College. At the time of the interview, she had been in her position a little over one year. In this narrative, she describes her systematic approach to her job search and how she managed to get teaching experience as a graduate student on fellowship.

How I got here

I went to grad school knowing that I would want to teach. [During undergrad], I [thought] it would be pretty fun to be a professor. It was always about teaching for me, it was never about doing the research. I went to grad school so I could get a PhD so I could teach. Looking back on it, it was probably a really poor decision because when I was in undergrad, I did do research, but I would do homework; I would do everything possible and then I would do the research. It was always the last thing that I wanted to do. And then I [thought], I'll go to grad school.

I got a non-thesis [master's degree], but I always wanted to teach. Because that was my goal, I chose my advisor because he got people out fast, so I figured I could get out fast and teach faster.

The one drawback was that I was lucky enough to be on fellowships for five years, but when you're on fellowship, you're not supposed to teach. It was a curse and a gift at the same time. It gave me the ability to finish quickly, but at the same time I did not have the opportunity to teach. [But I did] manage to weasel my way into teaching [by volunteering during one summer].

I took an [engineering education] class the second to last fall I was at [PhD University], which was really interesting. I knew [this class] was a good way to learn the ins and outs of how to become a better teacher. And then I taught a junior level dynamics class for a summer which was a lot of fun. And I did pretty well. Everyone liked me so that was good. I [thought] yes, I am doing something right. And then that following fall I started applying for positions.

I knew I wanted to start off at least trying for a tenure track position. And I [figured] if I don't get tenure track I'll move down the ladder and start looking at adjunct or non-tenure track positions. Well, ok, more like adjunct positions, because there were a couple of universities that I

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applied to that did not offer tenure and that did not bother me. But nobody had tenure instead of the one person that sits in the class and teaches five classes doesn't have tenure. Tenure for me wasn't necessarily a draw, it's just that there seem to be more options for tenure than for non-tenure track, and I didn't particularly want to start off in an adjuncting role. Because of the whole horror stories in the news lately, which are probably true.

Then I interviewed a bunch my last year. [Since] I knew I wanted to teach, I didn't want a university that had high research expectations. Or research expectations that I couldn't transition in from a disciplinary field to engineering education. Which I still haven't done, but there's still time. I looked at all of the job postings and I also looked at the Carnegie Classifications. I made this spreadsheet with the list, I looked at all of the colleges in the US that offered engineering based on ABET. I went first with ABET's list, and then I found their Carnegie Classification based on that list, and then I went from there.

Then I would look at job postings and see which job postings were available and put it in my spreadsheet. I'd [notice], this is a job but it's at an R1 Institution, so I'd put it low on the list. Or [Carnegie calls it] "Highest" now. Then when I was looking at schools, I would apply for ones that had "higher" research, or "moderate". I did interview at [one university that had "higher" research activity].

There were higher research expectations [at "higher" research activity university]. But [that institution was] my first interview, so I was really excited. I went there and [thought] this is awesome! But then afterwards, [I realized], oh maybe one journal article per year isn't necessarily something that I want to do. But then when they [said], you only teach one class per semester, I [thought], yes, I can make it the best class ever. Not realizing – well kind of realizing that that meant that the other 45% percent was going towards research. And they told me that I could only do technical research there, no engineering education research in that department. And I [thought], crap, my [technical] research is not fundable, and it's not going to go anywhere. That was the school that I interviewed at that had the highest level of research. They didn't have any women in the department so they were probably looking for a female too.

I applied to 40 different positions and I heard back from about half of those. I had a bunch of on campus interviews. It was probably eight interviews.

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At [Current Institution, a Baccalaureate College], I was required to give a research talk and a teaching talk. [Both] were open for students to come to but not a lot did. They [told me to] pick a topic on a junior level engineering topic, so I chose integrals of the motion, because I had taught a dynamics class and that was something I was familiar with. I gave a talk on integrals of the motion, and I did an example of two astronauts. It was conservation of momentum and I had two astronauts who were floating and hanging on to each other.

[I was attracted to my current institution because] I know it's a teaching focused institution. That's what really excited me. In our interview our chair [said], "I was researcher of the year. I brought in \$100,000 one year." That was really exciting to me, because I [thought], ok I don't have to have research expectations. There's not a lot of pressure in that sense, and I get to teach a lot. Which was what really drew me to [Current Institution].

I did a terrible job negotiating, and by terrible, I mean I did not negotiate. I got this position, they [actually] offered it to me on-site, which was really unusual. I was leaving and they [said], we want to offer you the job, and I [said], "thanks guys, but I still have three more interviews lined up and I feel bad saying no to them." We had already booked the travel, so I finished up my interview rounds and [then] they [said], ok, it's been a month. And then the other school I was really interested in shot me down, so then I went to [Current Institution].

My preparations for teaching

It was always something that I found relatively, I wouldn't say easy to do, but it's something that I've always enjoyed doing. Even in undergrad, I had a couple guys I did math with, and I was the strongest person on the team, but I was always willing to help them along as well and it didn't really upset me that they were super slow or not really good. One of my math buddy's parents – I went over to his house once, and they [said], thank you for getting him through the math classes.

It's always been something that I've done. My mom even said that when I was growing up, in elementary school, she would have to push the teachers to make things harder for me so that I wouldn't just be the helper around the classroom telling people what to do. My homeroom in high school was a tutoring room, so I had an open hour, and I would spend my open hour tutoring, helping people in that, in math and various other aspects. And then in undergrad, I was

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a tutor for all four years, and I did math and chemistry, and I was terrible at chemistry but I still tutored.

The only [teaching experience] I had in grad school was teaching a summer class, a junior level dynamics class to twenty some students. I feel bad because I [had said], you're not paying me so I need a grader because you can pay a grader. So, one of my lab mates was the grader for my class. I didn't have to grade, but I taught it, and [then] they had to back-pay me, and I feel bad for that.

That was the only teaching experience that I had in a more formal setting. I never did any guest lecturing because my advisor was always there, so it was only teaching that class. I was fortunate to be able to do that to have an experience listed on my resume.

[Getting that teaching experience was tedious.] Since I knew I wanted [the teaching experience], and I didn't want to be paid, I just wanted to volunteer. I knew that they taught dynamics over the course of the summer, so then I asked my advisor, "hey is it ok if I teach dynamics, I want to teach," or "I want to be a professor and this would bolster my resume," and he was totally fine with it.

Then I talked to – I was also pretty close with our admins, so I kind of could figure out what classes they wanted offered, and I [said], I'll teach anything, anything at all. And I knew other grad students had taught over the summer as well. I was going to teach a controls class but it fell through, so the only thing left was dynamics. My advisor usually taught it and another professor usually taught it as well. But my advisor was ok with me teaching it so I went to the undergraduate chair first, and [said], hey is it ok if I teach dynamics over the summer, and he [said], yeah, you have to go to the grad chair. I went to the grad chair and I was [told him], I'm going to teach this class and you don't have to pay me, and he [said] sweet.

So that went through. And [the other professor that taught it], she let me talk to one of her grad students and use her notes for that semester. Then I collected all my advisor's notes for the class and all of her notes for the class and used those to make my own notes. So that's how I did it, sneakily.

It was a lot of fun. It was my whole summer, I didn't do any research, or maybe just a little research, but that's ok. It was an eight-week class, and I got to be in charge and I tried to do some active learning. And looking back on it, I'm sure I was pretty terrible, but I got great

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reviews, because I'm pretty sure I was better than everyone else there because it's an R1 university.

[In terms of being more prepared for teaching], if I had to go back and redesign [my graduate program], I would include a teaching component. More engineering education – I'd say more practical classes than [educational] theory. I'd want to take an upper level statistics class so I know statistics beyond basic statistics. [That] would be what I would do for redesigning. [It would have been great] if I could have gotten more teaching experience, but I know I couldn't have. [Having] a way to get a teaching certificate for people who didn't have the opportunity to teach [would also be good].

My early days as a professor and what I am doing now

Going from being a student to being a faculty member [was the most obvious transition]. One thing I have noticed, well I remember my advisor talking about how he and another professor started with a couple years between each other and they were both in the [same] field, but they did not collaborate at all, whatsoever, in any way shape or form, because they were judged on what they did and if they collaborated with somebody else, maybe the other person did all the work.

But at [Current Institution], I've found that people are super friendly and they are willing to help. They are open to collaborations. [For example], I am going to a conference in a couple of weeks, and I wrote a paper with two other guys that are in our area. I am the first author because I pressured the other two into writing a paper for this conference, because I wanted to go. And it has nothing to do with what I'm in. And the third author [said], I need a publication, I'll definitely do it. There's no – we are not competing with each other to find funding, which is really nice. And if you are gone for a conference, you just ask somebody, "hey can you cover my class?" and if they are not busy, they'll cancel [their] office hours and cover your class for you.

Last year I didn't really have any service at all because they protected me from it. I did get advisees, so we'll see how this year turns out instead. But for now, I'd say I'm pretty satisfied [with the balance between my roles]. I should do more research, but it's not necessarily particularly what I want to do.

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It's pushing yourself to do that instead of focusing on teaching. It's also just you going out and if you feel like you want to make changes to your classes, they're fine with that. You have to seek out the people you want advice from. We have a [teaching support] person and I've gone to a bunch of her workshops to try to improve my teaching. And I'm the only one of the few engineering people that does that.

I do feel it is important to show students how what they are learning actually applies in real life, or to the people that actually use it in real life. By going on my externship/fellowship [in industry] or whatever you call what I did this summer, I got a lot more examples that I can bring to class and say this is how you use this information. That was really helpful.

[I am also working on creating an] inclusive environment, and that's being – I guess you could say it's almost being student centered. Adapting your class so you hit everyone, not necessarily just someone that learns like you. That's trying to be adaptive in your teaching style. I'm trying to create an environment where you can learn. I have clear assessment requirements, and I am always looking to improve whatever the heck I am doing. And then, if you're a student in my class, you're going to take an active role in your learning, and you're going to commit to learning and collaborate with peers.

This past year has also been me discovering who I am as a teacher and how I teach. [I am also exploring] how I like to teach, and I would say that *my* teaching statement is more of a theoretical framework, more so than what's actually happened over the course of the year. But the overall premise still holds true.

What tenure looks like here

Teaching is a very big component in terms of our tenure. From what I've heard from faculty members, you need one published peer-reviewed [journal article] in the six years to get to tenure. I've got my one publication from my grad school work, so I'm [thinking], check. I think I'll still go to conferences to make sure that I hit those deadlines. And you're supposed to apply for internal grants. I don't know if you need to get external grants. If you go that route, you're teaching is expected to be very good or excellent. They value teaching and service higher than other institutions do.

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But, I don't feel the pressure that I have to do a lot more for tenure than I would do otherwise. They are starting to implement more of a research focus. They're not really sure what's going to happen. They are talking about having a second track for people that are more interested in doing research, so their teaching loads might be reduced so their service load would be increased, or something to that effect. Because there are some faculty members that want to do research, and there are faculty members that just want to teach. It's an interesting dynamic.

[Our teaching is evaluated with] end of the course surveys from students. And our chair sat in on one of my classes one time and told me I did a good job. His only comment was that maybe I should slow down, but that was all the feedback I got. So, no, even though we are a teaching university, there's no feedback on your teaching.

People going up for tenure are stressed out about it. But everybody else isn't. It doesn't seem to have quite as much focus as a top – highest research institution. You hear about tenure, but I don't feel [that] – at least I guess my perception is, maybe I'm just too cocky or something, and I'm [thinking], I could totally get tenure. Piece of cake, no worries. From that perspective, I'm not worried. But I might get more worried as time goes on. But for now, not a lot of pressure. But I mean it was just my first year.

[In terms of research], any research goes, [which is] nice. So, I can do either [technical or educational], it's not one or the other. Students don't like it as much because I don't have any research for them to do. This fall, I'm continuing on with the research I did last year with my friend from undergrad. And that is looking at student assumptions in simulations, so whether or not students go the extra mile, or which students go the extra mile on problems. We are going to try to reformulate problems so they are more stretch problems that they require students to go out and look for extra information.