

Know Your Wisconsin Mathematician

Interview with Benjamin V.C. Collins, Professor Emeritus, UW-Platteville

By Benjamin V.C. Collins, Epic



In fifteen years of KYWM, no one has ever interviewed themselves before.

Well, I talk to myself all the time. I don't see why I can't interview myself.

Where did you grow up?

My father changed jobs several times while I was growing up, and changed careers once, too. So I moved around quite a bit. I lived the first part of my life in small towns in Michigan. I lived for a while on Staten Island, in New York City. When I was in high school, my family moved to Pella, Iowa, where my mother still lives today.

When did you decide that mathematics was what you wanted to do with your life?

I was always good in math, and got ahead of my classmates while I was in middle school. I took college math courses in high school, when that was somewhat rarer than it is today. So when I went to college, majoring in math seemed to be the thing to do. I wasn't sure what I wanted to get out of a math major. It wasn't until I was in graduate school, and the teaching bug hit me, that I really realized that that was going to be my career.

Where did you go to undergraduate school?

I went to Central College in Pella, where both of my parents were teaching at the time. It was a very fortunate choice. As I say, I wasn't sure what I wanted to do – I was also thinking about majoring in Theatre – and so I didn't seek out a school with a well-known math program. But Central's program was right for me. They didn't generally have a lot of students come through headed for graduate school in math, but they nevertheless delivered a rigorous education. I went to grad school with students whose undergraduate degrees were from Princeton, M.I.T., Northwestern, Michigan, etc., and I never felt out of my league. Most of them had had more courses than I had, but they didn't have a better foundation.

What about graduate school?

Right after Central, I went to Ann Arbor, to the University of Michigan. I spent three years there, and earned my master's degree. It was a great time, and I still have some friends from those days. That's where I got my first exposure to teaching.

After some time off (about which more anon), I came to Madison and enrolled in the Ph.D. program. I was very lucky to become the very first graduate student under a young man named Paul Terwilliger. (I was not the first of Paul's students to earn my degree, but by golly, I was the first to sign on!) Paul was a terrific mentor. He was always the most generous with the things that he valued the most – his time and his ideas. I don't think it's an exaggeration to say that I couldn't have finished my Ph.D. without him.

What was the influence of your family on your education?

My father had a Ph.D in education. My mother has an Ed.D., also in education. My sister has two master's degrees. So I grew up with the expectation that education was good, and wasn't necessarily going to stop after one undergraduate degree. I think my family would have supported me if I had dropped out of school to become an actor, but they certainly would have been surprised.

Are there any teachers who had influenced you to become a mathematician?

As I alluded to earlier, the core faculty at Central when I was there had a major influence on me. They were Lee Graber, Don Meyer, Agnes Andreassian, and Tom Iverson. Those four really shaped not only the way that I saw mathematics, but also the way that I taught it. Certainly early in my teaching career, I consciously used them as role models.

I don't think Paul Terwilliger ever really understood my drive to teach. He has always been caught up in the beauty of research mathematics. (Although I will say that he is also a very good teacher.) But he also supported me in making my own choices, and I respect him for that.

How did you end up at UW-Platteville?

After my master's degree, I needed a little time to decide if teaching was really the thing that I wanted to do. I had enjoyed being a Teaching Assistant at Michigan, where they have a really good program. But I wasn't sure if it was something I could do full time. That was the late 1980's, a period where one could get a temporary job with a master's degree, and that's what I did. I taught for two years at St. John's University and the College of St. Benedict in Minnesota. That was another very fortunate choice for me. A lot of programs would have taken this young, temporary guy and stuck him in all the lower-level courses and tried to keep him out of trouble. But the department at CSB/SJU treated me almost as if I was a full-time member of the faculty. They let me teach a variety of courses, and let me participate in faculty governance to a limited extent. They supported me when I needed it, and gave me room to experiment in my classroom when I needed that. I still have friends from that time, thirty years later.

Unfortunately, they weren't hiring when I finished my Ph.D. in 1996, so I went to teach at Midland Lutheran College, in Fremont, Nebraska. That was a tenure-track position, and I got along well with most of my colleagues, but I wasn't really satisfied. After a few years, I went back on the job market in a very focused way. In 2000, when I applied for the job at UW-Platteville, I only applied for three other jobs. I was one of three people hired at Platteville that year, and I was mostly happy for my twenty years there.

My former colleagues at Platteville were a terrific group to work with. I will stack them up against any math department in the state in terms of delivering a quality undergraduate education in mathematics. Some of them are very traditional, chalk-and-talk sorts of teachers. Others are more innovative. But at the end of the day, they are all committed to delivering the best education that they can, and they all work together to do that. I felt very much at home there, and I like to think that I contributed my share.

The students at UW-Platteville are terrific. There are a high percentage of first-generation students. Some don't have good preparation for college, or good support systems. But most of them work really hard, and they are serious about their studies.

And yet, you left.

I did. It's no secret that the UW System, as a whole, has been struggling for at least the last five to ten years. Declining enrollments have led to budget problems. A lot of decisions have been made, not all of which, in my opinion, have been in the best interests of the students. For some time, we've all been struggling as the University tries to do more for students with fewer resources.

In the fall of 2019, UW-Platteville announced a Voluntary Separation program, with incentives for faculty of a certain age and tenure to take early retirement. As it happened, I was among the very

youngest faculty who were eligible for the program. It was a hard decision, but I decided to take the buyout and take my life in a new direction.

How are you settling in at Epic?

It was a very strange time to start a new job. I have a bunch of new colleagues whom I have never even met face-to-face. All my meetings take place remotely. Nonetheless, I have managed to get to know some people. My new colleagues are extremely smart, and have been very welcoming. I have had a lot to learn – about the healthcare industry and about programming in M – and they have been great about helping me. I’m just beginning to get comfortable in my new role.

Do you use mathematics at Epic?

Well, I am never called on to integrate rational functions. My job is to help customers who want the software to do something in particular. Maybe it’s malfunctioning, or maybe it’s just something they would like to be able to do, but can’t figure out how. I have to figure out what’s wrong, or if the thing they want is possible. That means I have to select from a variety of tools and possible approaches, and figure out which is the best one to answer this particular question. To me, that’s mathematical problem solving.

Will you go back to teaching some day?

Never say never.

What courses did you like to teach?

I loved to teach the History of Math course. I have been hooked on the history of math since reading *Journey Through Genius* by William Dunham, shortly after it first came out in the late 1980s. There is so much interesting material there. I also loved to teach Discrete Math, which at UW-Platteville also serves as an intro to proofs course. A lot of students struggle with it, but a lot also find it an exciting gateway into a whole new way of looking at math.

Really, I always tried to make the best of whatever courses I was teaching. The rewards are different for teaching Precalculus than they are for teaching Abstract Algebra, but the rewards are there.

What of your work do you like the best? What are you most proud of?

I’m always happy to hear from former students who have positive memories of my courses. Of course I’m still in touch with some former math and engineering majors. (In fact, I’ve run into several of my former students at Epic.) But sometimes I’ll just run into a business major or an English major from years before who will say, “I understood math in your course, and I never expected to.” That means a lot to me.

How have you been involved with the MAA?

I started as a student member, when I was an undergraduate at Central, so I have passed the 35-year membership mark. I wasn’t really active, though, until I arrived in Wisconsin for the second time, in 2000.

I became the second director of Section NExT-Wisconsin, then called Project NExT-Wisconsin. Jen Szydluk was the first director, and those are tough shoes to fill. When I was done with that, I became the Public Information for the section, a post which I have held for fifteen years, up through this spring. I was part of the ad hoc committee to rewrite the bylaws in 2012, and I’m chairing the current committee to review and revise them again, now that the Association is requiring a review every 10 years. I have also served as the unofficial historian of the Section.

At the Association level, I was a member of the Committee on Sections for six years. I have also just been named the Vice Chair for Services for the Business, Industry, and Government Special Interest Group of the MAA (BIG SIGMAA).

What is your advice to college students and new teachers?

Never be afraid to challenge yourself. It has been quite an adventure to leave my teaching job, where I was comfortable, and good at what I was doing, for a brand new job that needs new skills, where I'm once again the new kid on the block. It hasn't always been easy. But it was the right thing for me.

If you don't like where you are right now, take stock. Find the things that you do well, and strengthen them. Find the things that aren't working, and change them. If I can change at my age, you can certainly change things that aren't working for you.

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| Who is a Wisconsin Mathematician that you would like to know? Send suggestions for the next KYWM to Anthony Van Groningen, vangroningen@msoe.edu . |
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