

# Patrick Caton story, Part One

(As published in The Oak Ridger's Historically Speaking column the week of May 11, 2020)

Benita Albert, an amazing woman, for sure, reflects back on our beginning partnership collaborating on *Historically Speaking* columns. I echo her joy at working together. She continues to bring us outstanding commentary on those individuals who graduate from our schools and go on to become great contributors to society in many ways.

I am encouraging her to continue looking for subjects from all across the school's history as I see a really great book at the end of our project! I am sure you agree...

Enjoy learning about Patrick Caton.

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When D. Ray and I began this partnership, per his suggestion that Oak Ridge Schools alumni stories would make a great news feature series, I knew this would be an inspiring assignment. Having been an Oak Ridge High School mathematics teacher for forty-four years, I would never have dreamed of becoming an interviewer and writer. This new venture has been made easier by the seemingly endless list of former Oak Ridge students who are making important contributions to society and who are willing to share their amazing journeys.

I have heard much about completing a bucket list in retirement. It recently occurred to me that, though I have never constructed said list; subconsciously, I have been evolving my own teacher's 'wishing-well list'. A bucket could not hold all my 'wishes' from a most rewarding career as an educator in the Oak Ridge Schools plus my new ventures into writing.

Through work with the Oak Ridge Public Schools Education Foundation and the book, *Celebrating 75 Years of Excellence in Education in the Oak Ridge Schools 1943-2018*, I have met many alumni and collected their Oak Ridge Schools memories. Secondly, I got out of my comfort zone (mathematics) and honed my writing skills with the help of marvelously patient, retired ORHS English teachers who served as the book's editors. Thirdly, I have stayed immersed in educational issues and am proud to support innovative teacher grant proposals in the Oak Ridge Schools through ORPSEF's "Making a Critical Difference" program. Fourth on the list, I have reconnected to so many former students and rejoiced over the resourceful world citizens they have become. My 'wishing-well list' has recently taken me to a new level, an overwhelming experience of sitting in the classroom of a former student who is now a United States Naval Academy engineering professor.

Patrick Caton, ORHS Class of 1993, invited me to observe his class section entitled "Energy Analysis of Transportation Systems," a one-class snapshot of his creatively designed course offering, "Energy Analysis, Policy, and Security." To see a master educator in action was a great thrill, a feeling akin to a 'circle of life' experience for me as his teacher for two years of Calculus at ORHS. Part Two of Patrick's story will offer more information on this course and Patrick's career. This Part One installment continues with the story of his Oak Ridge roots.

John and Gloria Caton met as chemistry majors in Juniata College in their home state of Pennsylvania. They were married after their first year of graduate school at Iowa State where they both completed PhD programs in Analytical Chemistry. John said that because Iowa State's Ames Laboratory had connections to the Manhattan Project, Gloria and he were well aware of Oak Ridge.

In June 1968, John accepted a job at the Oak Ridge National Laboratory in the Analytical Chemistry Division where he worked on numerous projects during his thirty-two-year career. Since Gloria could not be employed in the same group, she began a contract with the Technical Information Center in Metallurgy. Later employed at ORNL, she was involved in technical information applications such as designing a website for the Nuclear Regulatory Commission to include real-time data access. She said that her work, though mainly outside of chemistry, was fulfilling and the evolving new technology was always interesting and challenging work.

Their son Patrick was born in 1975. They had purchased a new home on Montreal Lane in 1970, and from his home Patrick walked to nearby Linden School. The neighborhood was full of playmates who, like Patrick, matriculated on to Robertsville Junior High and Oak Ridge High School.

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Of his school years, Patrick said, "Among many wonderful teachers and classes, the Civics class in ninth grade, the Combined Studies class, the memorable and sometimes wacky teachers, and being able to take advanced classes in math stand out. Having open campus lunch was a great freedom and a necessary way for me to finish English essays by the start of fifth period."

Patrick continues with memories of his passion for swimming: "I was a dedicated member of the Atomic City Aquatic Club and spent my mornings before school, afternoons after school, and many weekends staring at the bottom of a pool." The ORHS 1993 Oak Log section on swimming featured a quote from Patrick concerning an ACAC challenge: "My most memorable moment was when I first swam at Junior Nationals in the 400-medley relay. The whole team swam out of our minds, and we ended up placing a surprising fourth when we were seeded nineteenth."

Later, as a freshman at Stanford University, Patrick experienced the honor of swimming on the 1994 NCAA Division 1 national championship men's swimming and diving team. The time commitment required for the swim team, and, as he phrased it, "The level of competition," persuaded Patrick to withdraw from the sport at the end of the 1994 season. He would go on to complete two undergraduate degrees in psychology and in mechanical engineering and ultimately a 2005 doctoral degree in Mechanical Engineering, all from Stanford.

Patrick tested his 'teaching chops' spending two years (1998-2000) as a teacher of eighth grade science, high school basic science, pre-calculus, and physics at a private school in California. I was curious to hear some of his experiences from the classroom and, in particular, more about innovative projects of which Patrick's parents had made me aware.

Patrick mentioned a few: "I was always interested in engines, and my college adviser, who ran the Stanford engine lab, and would later become my graduate adviser, donated an L98 Corvette engine on a stand. I used it for classroom demos; we would occasionally take it apart, and it was just interesting to look at. It was better than a bulletin board with quotes on it. In physics class, I had students build a catapult (which was kind of a failure), and we investigated stability by building model rockets and successively removing fins." On the latter experiment, Patrick added, "We had to hide behind a shelter to shoot the rockets off without fins."

Don't you know his secondary school students loved the reality-based, experimental discovery and daringness of his teaching? While in graduate school, Patrick taught at Stanford and also for a term at Santa Clara University. He described these opportunities as a great honor and a career-defining realization of his affinity for teaching.

There is so much more to tell of Patrick's professional journey. He left California for a United States Naval Academy faculty appointment in Mechanical Engineering, beginning in 2005. Part Two of his story will describe my visit to his USNA classroom and look inside an exciting, interdisciplinary course he has helped design with colleagues at the Academy.

Additionally, you will learn of research studies he leads and/or mentors and of his active family and civic life.

I have often said that I was privileged to see, first-hand, the curious minds and creative problem solvers ORHS students brought to my classroom. In fact, I loved to say, "I see the future each day, and the future looks bright". I once again felt this aura in Patrick Caton's senior engineering class.

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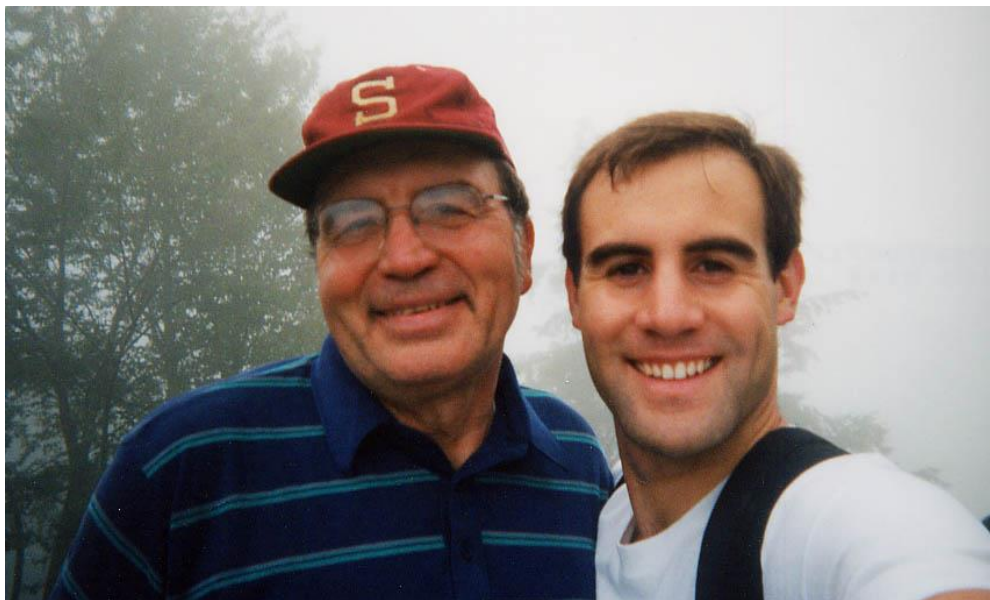
I know you now look forward to part two of Benita's look into a dedicated educator's career. Patrick has obviously made a positive impact. Let's go together with Benita into his class in the next installment of this series.

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Patrick Caton's Oak Ridge High School casual photograph



Patrick and his father, John Caton, on a hike in the Smokies