

James Norton, '69 and Ph.D. '79: Teachable moments

By Jennifer Durgin

Click-click, tap-tap goes the chalk in James Norton's hand. He's jotting down words—"iron," "erythropoietin," "DNA," "marrow," "protein," "B12," "folate"—on the blackboard as his students call them out. "Oxygen?" one student suggests.

"Okay . . ." Norton pauses. "You need that to live," he admits. Several students chuckle, knowing he's looking for something more specific. He adds quickly, "I'll put it up, though."

Eventually, other students call out the remaining words he's looking for—"stem cells" and "ferritin."

As James Norton, Ph.D., professor and chair of physiology at Maine's University of New England College of Osteopathic Medicine (UNECOM), delves into hematopoiesis—the formation of red blood cells—he draws sweeping lines from one word to another and gestures emphatically. He looks like a coach diagramming a play. His voice is energetic. He seems every bit the extrovert.

In private conversation, however, Norton is much more sub-

dued. His public persona is intentional but "it's not fake," says Norton. Being outgoing in the classroom gets students' attention, he explains. The persona is also "a little bit of a defense mechanism," something that he can switch off at will. Although he loves teaching, interacting with students is draining for him. When his lectures are over, he often goes to the gym to be by himself for a couple of hours.

Norton, who grew up in Maine, never imagined he would become a teacher. Although neither of his parents had gone to college, as a bright but shy youngster he was told, "You're a smart kid. You do well in school. You can be anything you want."

"There was this societal idea that being a doctor was about the highest thing," says Norton. So he decided to become a physician.

Raised Catholic, Norton attended a Jesuit high school in South Portland, Maine, and enrolled in 1963 at the College of the Holy Cross in Worcester, Mass. He majored in classics because he wanted to explore subjects other than the sciences; he figured he'd get enough of them in medical school. In 1967, he began the two-year medical sciences program at Dartmouth, after which, like many DMS students at that time, he transferred to Harvard Medical School.

But his clinical rotations at Harvard gave Norton the feeling that medicine was not for him. "I had an idea of physicians based upon the pediatrician that came to our house when I was a kid back in the 1950s," he says. But "the instructors I had during my surgery clerkship and medicine clerkship just weren't like that at all. They were these high-powered tertiary-care types, specialist folks. . . . It's just, I didn't fit." So Norton left medical school in 1971. Although it was the right decision for him, leaving school cost him his draft deferment.

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With the Vietnam War still raging, he started getting calls from military recruiters. But just as Norton had known that medicine wasn't right for him, he knew he simply couldn't go to war. "I didn't see why anybody who was a Catholic would be anything other than a conscientious objector," he says. Yet some of the Jesuit priests who had taught him in high school refused to write letters of support for him to give to his draft board. A Quaker friend finally helped him achieve conscientious-objector status. "I thought that taking a human life is an absolute wrong," says Norton, "and I still do."

For the next few years, Norton worked as a research assistant in a blood-cell lab at Maine Medical Center in Portland. He was nearly 30 when he decided to go back to school. Medicine hadn't been the right choice, but he still enjoyed learning about how bodies work. So he came to DMS, again, this time to get a Ph.D. in physiology.

"During the Ph.D. program at Dartmouth, we had plenty of opportunities to give seminars," Norton recalls. "We had a good

group of graduate students who would attend one another's seminars and meet down at Peter Christian's [a pub in Hanover] and just ruthlessly dissect everything that we did, in a good way. . . . 'You gotta stop scratching yourself.' 'You kept talking to the board.' All that kind of stuff. And I thought, there's really something to this."

He began paying attention to how all his professors taught, mentally filing away different techniques. The colored chalk Norton likes to use "is a little homage to Marsh Tenney," he says of a noted former DMS dean. Heinz Valtin, M.D., a professor emeritus of physiology, "is very logical in the way he explains things. So some things require the students to just sit back and listen through a logical series of arguments." But Norton thinks he probably teaches most like Robert Goselin, M.D., Ph.D., a professor emeritus of pharmacology. "He would stop and talk to himself in the middle of class if he lost his train of thought," Norton remembers. "He did stuff I find myself doing."

After completing his Ph.D. in 1979, Norton returned to Maine Medical Center, this time as a research associate in a blood-cell lab. A year later, he became an assistant professor of physiology at UNECOM. Although his own medical education had been in allopathic medicine, Norton had known an osteopathic physician as a child and saw value in the discipline's use of physical manipulation to restore health—the major difference between osteopathic and allopathic medicine. In years past, the training for doctors of osteopathy (D.O.'s) was considered less exacting than that for allopathic medical doctors (M.D.'s). Today, however, "the academic training is essentially the same, in terms of depth, scope, and rigor," says Norton.

In the 25 years since Norton began teaching at UNECOM, he's developed some strong opinions about higher education. "A kid can go

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K through 12 and be taught by people who are professional educators. Then they get to college,” he points out, “and they’re taught by people like me who’ve never had an education course.” Norton thinks every graduate program should include coursework in “how to manage your classroom, how to manage a course, things to do in class to make life interesting to your students.”

Norton especially laments the widespread classroom use of PowerPoint, a presentation software program. “For me,” he says, “there’s so much more flexibility

using the board and transparencies than there is using PowerPoint, which forces you into a linear sequence,” with one slide following another. “I can put what I want up on the board at the rate in which I want to put it up. I can change the order of transparencies at the last minute. I can not show some if I don’t want to.” Norton also rues the use of PowerPoint printouts—which reproduce the slides with adjacent lines for note-taking—in place of more traditional handouts and study guides. The cryptic, bulleted phrases on the slides may make sense during class, but what about in two weeks or two years?

“The people who use [PowerPoint] best are some of the clinical folks who do case studies,” says Norton. They’ll show a picture of a patient and an ulcer, for example, and ask students what tests they might want to do. “So they can actually use it in a really interactive way. . . . My feeling is you want to do something in the classroom that [students] can’t get from books.”

In his lectures, Norton weaves in digressions and anecdotes to help the students remember the material. Often, he takes time to explain the Latin and Greek roots of words. “‘Mediterranean’ is actually Latin for ‘middle of the Earth.’ But for the Greeks it was ‘Thalassa,’” he says as he writes “Thalassa” on the board. So, he continues, “Thalassemias are inherited disorders of hemoglobin synthesis associated with ethnic groups that surround the Mediterranean.” He talks about King George III when porphyria, a hemoglobin disease, comes up: “The dementia and depression associated with his porphyria distracted his attention from what was going on in the colonies.”

With his conversational tone, Norton is good at dissipating “fear in the classroom,” says Wayne Dodakian, a second-year student at UNECOM. But that doesn’t mean he’s a pushover. “Dr. Norton is old school” in the rigorous standards he holds students to, adds Dodakian.

“Students try to wheel and deal,” explains Richard Reese, M.D., chair of the department of pharmacology at UNECOM and a 1967



DMS graduate James Norton, five-time winner of his school’s teacher-of-the-year award, finds himself drawing on techniques that his professors at Dartmouth used.

graduate of DMS. Norton “is fair, but he holds them to an appropriately high level and an ethical one.” Reese—who was an infectious disease specialist at Mary Imogene Bassett Hospital in Cooperstown, N.Y., for 20 years before joining the UNECOM faculty—often consults Norton when he’s faced with tough decisions, like whether to let a student who accidentally overlooked a section of a test complete it later. “I don’t have the kind of wisdom that 25 years of teaching students gives you,” says Reese. So when he has trouble

deciding what course of action is fairest, he phones Norton.

Being fair but tough is hard work. Norton spends about eight hours preparing for each hour of lecture, another three hours outside of every lecture helping students, and countless more hours overseeing the hematological, cardiovascular, respiratory, and renal courses. As the director for these courses, he sets the schedules, lines up the clinical faculty, attends almost all the lectures, and compiles the exams.

“Many of the folks who teach in our clinical courses are not professional educators,” explains Norton. “So they write questions which they think are good questions, but we always try to rewrite them to make them better.” He keeps his eye out for confusing phrasing, grammatical errors, and relevancy.

In the past, students identified confusing exam questions “just by complaining about them,” says Norton. He now has a more systematic approach. He attaches a sheet to exams that he administers and invites students to identify up to five troublesome questions. By combining this input with other data from the exam—such as the number of students who scored well overall but tended to get a particular question wrong—he has a scientific way of determining which questions, if any, should be thrown out.

Despite all of Norton’s efforts to avoid the “problematic, emotional way” in which some students contest exam questions, he can’t dodge students’ gripes completely. When he’s in the classroom, in extrovert mode, “it’s really cool, it’s a lot of fun,” he says. “But after the exams are graded, it sometimes becomes this adversarial kind of thing.”

Yet in the end, Norton’s students can’t say enough good things about their physiology professor. He has received UNECOM’s teacher-of-the-year award five times, most recently in 2001-02. And at this point in his career, even this self-proclaimed introvert can’t imagine doing anything but teaching. ■