Somebody to review these papers out, for the world to see?" Created to enable senior and junior biology majors to meet a physiology requirement, 435 enrolls just 100 students, giving Lokuta room to experiment.

Lokuta wondered as he began teaching Fundamentals of Human Physiology 435, to "put those papers out, for the world to see?" Created to enable senior and junior biology majors to meet a physiology requirement, 435 enrolls just 100 students, giving Lokuta room to experiment.

Inspired to give students a chance to develop and publish their own research projects, but finding few viable options for publishing undergraduates’ original scientific work, Lokuta decided to create his own journal. And so The Journal of Advanced Student Science was born.

While the Department of Neuroscience happily sponsored the journal, offering online space and support, staff members in teaching and learning services at UW had a number of questions for Lokuta. "They said, ‘That’s wonderful, but keep in mind you’re just taking an undergraduate paper and putting bells and whistles on it. It needs to be more authentic and valuable for students,” says Lokuta. And just as in all academic publication, provided that students complete those revisions, the papers can be published.

Steps to Publication

In Human Physiology 435, the road to publication in The Journal of Advanced Student Science begins as groups of 4 to 5 students design an original study. Then, through multiple steps, they compose an article based on the guidelines for one of the most central journals in the field, The Journal of Physiology. With 24 groups completing this complex project, clear expectations and deadlines are key.

Lokuta and his four TAs hand out the Authors’ Instructions from The Journal of Physiology. Then they divide up the project into four deadlines, each with well-defined requirements. “Without the clear deadlines and rubrics, it would be chaotic, stressful—and hard,” Lokuta says. “Having schedules of exactly what’s due and rubrics of what it’s supposed to look like has proven to be so vital for students. Then, when the submission goes to faculty, there are still problems, but not as many.”

Students follow the Authors’ Instructions, track down example articles from The Journal of Physiology, and jump right into drafting their introductions. Their first deadline arrives as early as two weeks into the semester. Lokuta wants students to get off the ground running, “getting into the literature right away, making sure that the question that they’re asking has some relevance, or seeing if anyone has ever asked this question.” Students formulate a hypothesis and lay out their project’s measurements. “This is one of the ‘roughest pieces,” says Lokuta, “requiring the most comment from TAs and me.”

(Continued on page 2)
After another two weeks, drawing on feedback from Lokuta and his TAs, students face the second deadline: a revised version of their introduction and a draft of their materials and methods sections. Students must also report any problems they’ve encountered with their projects and how they’ve solved those problems. Finally, they comment on group dynamics and division of labor.

With feedback from Lokuta and TAs on their study design, groups spend the next 6 weeks collecting data, analyzing it, and writing up their reports. Again following the Authors’ Instructions, students submit a full draft to Lokuta and the TAs for a final round of detailed feedback. At the end of these three rounds of drafting and revision, students have already produced “respectable pieces of work as is,” says Lokuta. At this point, “their work needs to be reviewed. It needs a fresh set of eyes, a scientific set of eyes, and that’s what we get from faculty reviewers.”

“A Scientific Set of Eyes”: Faculty Peer Review

That “scientific set of eyes” comes in the form of 20 UW-Madison Neuroscience faculty who volunteer every semester to respond to students’ work. A few months before the course, Lokuta recruits faculty through a carefully worded email inviting them to participate and offering feedback from colleagues about the value of participating. He lets them know the average time reviewing takes—about 2 hours—and the week-long timeline they have to provide feedback.

Relief and Engagement: The Students’ Response

“We can’t believe we’re being published,” says Lokuta. “And they can say, ‘Here’s my paper. I am published. Here is,” says Lokuta. At this point, “their work needs to be reviewed. It needs a fresh set of eyes, a scientific set of eyes, and that’s what we get from faculty reviewers.”

The students have been so engaged by this—by designing and doing their own experiments, by being reviewed and receiving authentic feedback. It’s not fake; it’s real.

He also offers reviewers one page of detailed instructions, reminding faculty that the papers are written by undergraduates new to experimental research with limited time and resources. Lokuta informs faculty reviewers: “You should ask and answer yourself: What is reasonable to expect of them? How do we build their lab science skills and science interest in general without crushing or demoralizing them?”

Faculty, in turn, offer challenging—yet supportive—feedback, pushing students to refine their thinking and writing. “A frequent comment is ‘You have data, you’ve analyzed it, but you’ve overstated your results. While it’s true that this is a trend, it doesn’t prove anything. How can you rein in the conclusion?’” Lokuta reports. Faculty response is overwhelmingly positive. “The faculty love it,” he says. “They get to see that these undergraduate students are quite capable scientists if you give them a chance.”

Setting Students Apart

Now in its fifth year of operation, The Journal of Advanced Student Science has certainly taken students’ lab writing out of the drawer and into the world, or at least across the country. Last January, a UW alumnus called Lokuta to inform him that one of the journal’s studies on distracted driving and reaction time is now referenced in the California Driver’s Manual. “If ever there was affirmation that what we’re doing is meaningful, and that people in a broader audience are paying attention to this, that was it. It was a powerful moment,” says Lokuta.

Students report back positively to Lokuta, telling him that they spoke about their projects at job or professional school interviews. For Lokuta, the journal’s ability to promote complex thinking and writing—while setting students apart—makes it a success: “The students have been so engaged by this—by designing and doing their own experiments, by being reviewed and receiving authentic feedback. It’s not fake; it’s real,” he says. “And they can say, ‘Here’s my paper. I am published. Here it is.’” Now that’s satisfying.

ENCE, DEEPENING LEARNING: LESSONS FROM PROFESSOR HANNAH ELDRIDGE

Elisabeth Miller
L&S Program in Writing Across the Curriculum

Writing assignments engage students and deepen their learning, finds the National Survey for Student Engagement (NSSE) recent survey of over 20,000 undergraduate students. But not just any writing assignments. Engaging writing assignments—those that increase students’ interest, time spent, and learning—must include interactive components, immerse students in meaning-making activities, and feature clear expectations.

In Literature in Translation 236: Extreme Stories: Tales of Criminality and Disease, UW-Madison German professor Hannah Eldridge brings those requirements to life. In addition to introducing students to fictional, legal, psychological, and medical cases charting the extremes of human experience, Eldridge carefully designs and sequences writing assignments.

Fulfilling a Communication-B requirement, 236 includes explicit instruction and extended support for writing, speaking, and information literacy. While that support is enabled by its small size—it’s capped at 20 students—Eldridge offers advice transferable across disciplines and course size.

In particular, she offers three vital lessons for designing assignments to engage students, deepen learning, and develop their writing in any course.

1) Audience is everything.

"My number one strategy for helping students succeed with writing assignments is to specify a specific audience for their papers," Eldridge says. Asserting that "you can’t know if you’re communicating effectively if you don’t know whom you’re writing for," Eldridge clearly defines an audience—apart from the professor—for many of her students’ papers. In 236, she starts small: students write a 500-word summary of one of the course readings for a fellow student who has missed the week’s reading, keeping in mind what terms or information this person needs to know.

Having that relatively familiar audience acclimates students to thinking about readers and what they need (or don’t need) to know. In this way, students move beyond thinking of “good writing” as a concept “defined in the professor’s head as something he or she wants, but hasn’t explained,” notes Eldridge. For the final project, students write for a more complex audience: they compose a letter to a politician making a policy recommendation regarding a legal, medical, or psychological issue addressed in class.

According to Eldridge, students “do an excellent job of identifying what would be compelling to these individuals. If they were writing to a socially conservative senator lobbying for HPV vaccines, they’d explain that this is not an issue of becoming sexually active, but a public health issue. If they were writing to another politician, they might use their research into that politician’s activities to say something like, ‘You’ve been involved with the Violence Against Women Act. Let me tell you how I think we should change our response to violence against women.’”

In the end, students “came up with very, very compelling solutions supported by evidence, and were also very aware of the real-world constraints that these politicians are under,” Eldridge reports. “I don’t think I had a single paper about which I thought, ‘Oh come on, we can never actually do that.’ They were all very aware of their audience, and that was what I had been going for.”

2) Give them the rubric.

Considering audience and grappling with complicated issues and arguments pushes students toward more complex thinking. But Eldridge acknowledges that “giving students something completely different and unexpected” increases the burden on instructors to make their expectations as clear as possible to students.

"My assignment sheets and instructions are extremely specific," Eldridge says. I explain the details of projects and offer time for questions about the Instructions. But I sometimes hear from students, ‘I didn’t know what you expected.’ And I think that happens precisely because past writing experiences have conditioned students to expect to write a standard five-paragraph essay: give some kind of a thesis, have some interchangeable example paragraphs, and repeat the thesis.”

An Overview of the Writing Assignments

The course has four major assignments:

- Summary of a reading for a peer
- Diagnosis of a protagonist using Diagnostic and Statistical Manual
- Annotated Bibliography for final paper
- Final paper: letter to a politician making a policy recommendation regarding a legal, medical, or psychological issue covered in class

Other kinds of writing instruction that Eldridge uses in the course:

- Weekly discussion posts
- Peer review of student writing
- Feedback from Writing Fellows (undergraduate writing tutors embedded in the course)
- Optional revision of major papers and reflection on revision

[Continued on page 5]
The Writing Across the Curriculum (WAC) Sourcebook, a resource for faculty, academic staff, and TAs, has been newly revised this year. Updated every two years, the WAC Sourcebook highlights innovative ways to teach with writing in the disciplines. It includes advice, best practices, and sample teaching materials.

The WAC Faculty Sourcebook features a new title—Locally Sourced—to honor the fact that well over 90% of its materials come from faculty, staff, and TAs at UW-Madison.

The 2014-2015 WAC Sourcebook features dozens of assignments, samples of feedback on student papers, and materials for teaching with writing from departments A to Z—from Atmospheric and Oceanic Studies to Zoology!

Sections in the revised WAC Sourcebook include:

- Communication-B and Writing-Intensive Criteria and Courses
- Foundations for Teaching with Writing
- Sequencing Assignments in Your Course
- Designing Effective Assignments
- Multimodal Writing Assignments and Writing in Online Courses
- Coaching Students to Succeed with Assignments
- Teaching Multilingual Writers
- Conferences and Student Peer Review
- Writing in Service Learning and Community-Based Learning
- Responding, Evaluating, Grading
- Fostering Research and Inquiry
- Teaching Oral Communication Skills
- Assessing Your Course
- Resources for Instructors and Students

Among many additions to the 2014-2015 Sourcebook are the following, from colleagues across campus:

- A new section on multimodal writing assignments and writing in online courses—including an ARIS assignment, tips for encouraging originality online, and advice on guiding written discussions in hybrid and online courses
- An updated section on supporting oral communication
- New advice about evaluating and grading multilingual writers
- New advice for evaluating writing projects, including:
  - a learning contract from a graduate-level social work course
  - shared goals for paper writing across undergraduate literature courses in the English Department
  - some of the reasons why student writing may fail to meet expectations
- New assignments and teaching materials, including:
  - from an undergraduate international studies course, writing a letter to the World Bank about shortcomings in current measures of poverty
  - from a zoology course, short writing assignments
  - from the Biocore undergraduate honors biology program, tips on scaffolding writing assignments
  - from a writing-intensive psychology course, focused activities for student peer review
  - materials for developing an accessible learning environment to support learners with disabilities

We’d be very glad to send you a copy of the 2014-2015 WAC Faculty Sourcebook! For a copy, please contact:

Brad Hughes: bthughes@wisc.edu or 263-3823
Elisabeth Miller: elmiller5@wisc.edu
Eldridge works against that expectation by being clear and specific about assignment and evaluation guidelines. She recommends developing and providing rubrics—or clear evaluation criteria for students and faculty to get on the same page. “Give them the rubric”—early on, Eldridge suggests, ideally as soon as you assign a project.

Then students use that rubric themselves to grade sample papers from previous classes. As a group, they discuss how they came to those evaluations. “I think that practice does diminish the feeling of arbitrariness in grading because they come up with surprisingly consistent evaluations of a given piece of work,” she says.

3) Einmal ist keinmal.

“Repetition is how we learn,” says Eldridge, “and there’s a German proverb ‘Einmal ist keinmal’ or ‘once is never.’ Unless we stop, reflect, and create coherence, students will feel like they’re buried by the coursework and come out the other end without reflecting on what they’ve learned.” For Eldridge, repetition, revision, and reflection are vital teaching and learning tools.

For every paper, she gives students the opportunity to revise once for the chance to regain up to half of the points they lost. “I decided to do that because to me it was more important that they get the opportunity to improve than that I have a pretty grade distribution, especially because we don’t do any exact assignment twice. So having the repetition via revision struck me as really, really important,” Eldridge explains. “I think students appreciate it mostly for grade purposes, but I think they get much more out of it than that.”

Students gain much from the reflection that Eldridge requires with revision: they must submit a letter explaining the revisions they chose to make based on feedback given by Eldridge and peers. Reflection is key to students’ learning, says Eldridge: “I’ve found that it’s not really enough simply to ask students to change their writing or thinking, or to do things differently; you need to encourage students to say for themselves, ‘Okay this is what I would do differently—and this is why.’”

Teaching students to articulate their thinking and learning is crucial for students and liberal arts departments: “I think that both for the benefit of students going out into the work world and for our own good, we need to teach students to be aware of exactly what skills they are gaining.” Eldridge reflects. When we fail to do so, “we cause students to sell themselves short. They have no account of what they can do as a result of a liberal arts degree, and we’re selling ourselves short. Teaching students to recognize how what they and we do matters can also be a reminder to us of why we got into the profession of teaching in the first place.”

To learn more about Writing Fellows or to apply to work with a Fellow in a course you are teaching in Spring 2015, please contact us.

Emily Hall, Director of the Writing Fellows Program
ehall@wisc.edu
263-3754

or

Brad Hughes, Director of the Writing Center and the Program in Writing Across the Curriculum
bhughes@wisc.edu
263-3823

Writing Fellows are talented, carefully selected, and extensively trained undergraduates who serve as peer writing tutors in classes across the College of Letters & Science. The Fellows make thoughtful comments on drafts of assigned papers and hold conferences with students to help them make smart, significant revisions to their papers before the papers are turned in for a grade. Building on the special trust that peers can share, Fellows help students not only to write better papers but also to take themselves more seriously as writers and thinkers.

Fellows are equipped to tutor writing across the L&S curriculum. In the past, they have worked with students in astronomy, Afro-American studies, history, philosophy, political science, chemistry, classics, English, women’s studies, sociology, zoology, mathematics, psychology, geography, and more.

Professor Katherine Cramer, who has worked with Writing Fellows multiple times in her political science courses, says:

“The Writing Fellows are outstanding in their ability to motivate students to adhere to the assignment. In particular, they make sure the students state and develop arguments in their papers and push them to address the readings and important themes from the course.”

You are eligible to apply to work with a Writing Fellow if you:

- are a faculty or academic staff member teaching a course with at least two writing assignments, with between 12 and 40 students enrolled in the course
- are willing to adjust your syllabus to allow time for revision and to require that all enrolled students work with the assigned Fellow(s)
- are willing to meet regularly with the assigned Fellow(s) to discuss assignments

The number of Writing Fellows is limited, so the sooner you let us know of your interest, the better!
THANKS TO OUR COMMUNICATION-B TA FELLOWS!

Adrienne Hagen
Classics

Josh Pultorak
Biology

Katrina Quisumbing King
Sociology

Christian Dewey
Geography

Honored for their outstanding teaching in Communication-B courses, these three TAs helped plan and lead the August 2014 training in Writing Across the Curriculum for over 70 new Communication-B TAs from across campus. Thanks for your incredible work!