We educate our students to make a good living and lead a good life. In almost every employment setting, effective communication is essential to connect with others and create value. From early childhood and for the rest of our lives, we practice and develop our skills at talking, refining our ability to express ideas and persuade. But we practice writing more rarely, particularly outside the stylized scratching of social media.

Yet writing is more durable than verbal communication. A letter from a loved one, a memorable book or poem, or a sharply crafted workplace memo can be impactful, sometimes profoundly so. The ability to write effectively is one of several characteristics that we collectively embrace as differentiating Badgers from others.

Writing Across the Curriculum at UW-Madison is based on two ideas that I believe in deeply. Nobody writes effectively without practice. And effective writing is valuable in every discipline. When I taught introductory economics courses, the enrollments were simply too large to allow me to assign writing, but in my graduate courses I always emphasized writing (and worked hard at teaching writing) through refereed reports and regular one-or-two-page idea essays. Activities that nurture skilled writing are high-impact practices, shown to promote deep learning and student engagement.

Our Writing Across the Curriculum (WAC) colleagues are nationally recognized leaders, offering creative and efficient ways to use writing to deepen students’ learning in your courses. The WAC staff are available to share their experiences and best practices to help faculty, instructional staff, and TAs design effective assignments, talk to students about writing, and respond to and evaluate that writing.

If you are curious, please attend a workshop, schedule a consultation, apply to work with undergraduate Writing Fellows, or review the hundreds of pages of advice and examples assembled on the WAC website (writing.wisc.edu/wac).

Those who employ and work with our graduates – as well as recipients of our alums’ well-crafted love letters and brilliant workplace memos – will thank you!
Preparing Students for Scientific Research with Writing Assignments and Peer Review

Mike Haen
Writing Across the Curriculum

In Zoology 957 (Topics in the Evolutionary Developmental Biology of Animals), a mix of graduate and advanced undergraduate students develop critical thinking and writing abilities that they will need throughout their careers. First taught by Assistant Professor Prashant Sharma in fall 2017, the course focuses on various themes in animal evolutionary development (“evo-devo”) and genetics. For Sharma, “The goal of the course is to prepare students to construct scientific arguments and engage in the peer review process, which are main activities in professional contexts.”

Professor Prashant Sharma
Department of Integrative Biology

In his lab, Sharma and his colleagues examine the macroevolution of invertebrates—mainly arthropods—and the genetic mechanisms that underlie that macroevolution. The lab is interested in questions like “What changes in developmental processes over time explain why a spider has eight legs as opposed to six?” Similar questions are the starting points for students’ projects in Zoology 957.

Preparing to Write

To help students become more critical readers and reviewers of published “evo-devo” research and of written work by their course peers, Sharma has designed class activities and writing assignments that outline clear expectations for student work, while allowing students freedom to explore and research their own questions and interests. During each course meeting throughout the semester, one or two students present a relevant research article they have read, and then they lead a discussion with classmates about limitations of the research and possible future directions. These discussions help students prepare for the formal written research project in the class.

For that writing project (a minimum of five pages, single-spaced), students have three options: (1) design a research proposal to test a hypothesis, (2) review a major issue in animal “evo-devo” and take a stand on that issue, or (3) develop a thesis chapter, manuscript, or preliminary/qualifying exam proposal. Usually, Sharma encourages graduate students to pursue option three, and he suggests that undergraduate students take on options one or two. To ensure that students stay on track with this independent project, Sharma asks students to declare their topics at the halfway point of the semester and he then provides some feedback to students about those initial topics.

Improving Drafts Through Peer Review

About two-thirds of the way through the semester, Sharma has students engage in a peer review process. As peer reviewers, students write a two-page critique of one peer’s draft. Reviewers’ feedback is guided by the evaluation criteria created by Sharma. There are six criteria including clarity, organization, use of literature, cohesion, conciseness, and scientific illustration (e.g., use of figures), which are scored from one to three, with three being the highest score. One example of these criteria (use of literature) is shown on page five.

“These evaluation criteria are largely informed by my experiences as an author in the field and as a reviewer for scholarly publications,” Sharma explained. Reflecting on his own experiences in graduate school and as a young scholar in the field, Sharma sees the peer review process as something that is essential, but that is often overlooked in the process of becoming a scientific researcher. “When I started doing science, no course really taught me how to do peer review, and I had to learn by doing it,” Sharma noted. At the start of the course, he noticed that few of his students had experience with the process. To ensure that students take the peer review seriously, Sharma also evaluates and scores their written reviews on a one-to-three scale according to two criteria—(1) critical thinking and (2) constructive criticism.

Responding to Peer Reviewers

When students revise their papers, Sharma asks students to respond to their peer’s critiques by explaining why they declined certain recommendations and how they revised their writing if they accepted reviewer recommendations. Those responses to reviewers are also evaluated by Sharma, according to the (1) quality of the rebuttal, or decline of a recommendation, and (2) quality of the revisions based on recommendations.

Before students review a peer’s paper and respond to their reviewer criticisms, Sharma designates class time to model how to engage in both of those practices. He explained, “To help students with review and rebuttal, I’ll use published journal articles and actual responses from editors—often my own—with names redacted and we discuss them collectively as a class.”

“To help students with review and rebuttal, I’ll use published journal articles and actual responses from editors—often my own...and we discuss them collectively as a class.”

Student Successes and Accomplishments

Although Sharma just started teaching this course in fall 2017, he has seen evidence of its effectiveness. For example, a graduate student in the course produced a substantial amount of writing for his upcoming qualifying exams.

(continued on page 5)
C ollaborating with the REACH project at UW-Madison, Professor Sara McKinnon has recently redesigned Communication Arts 260 (“Communication and Human Behavior”)—a lecture course that typically enrolls 240 students (mostly sophomores). Developed through the Provost’s Educational Initiative Program, REACH helps faculty in chemistry, mathematics, and psychology redesign typically large introductory courses to incorporate more active and student-centered learning. Recent ly, REACH has started collaborating with humanities and social science courses like Communication Arts (CA) 260.

Working with REACH learning consultant Theresa Pesavento, McKinnon and her teaching team replaced some traditional lecture-based teaching in CA 260 with interactive online lessons on Canvas, writing workshops, peer review sessions, and whole-group discussions about selected case studies. These activities, along with carefully designed formal and informal writing tasks, aim to improve student engagement and learning about theories and research on human communication.

In this updated version of the course, students apply theories and research to contemporary problems. In doing so, they develop thinking, communicating, and writing skills that they will use in their college careers and beyond. “One of the things I like most about teaching this course is the practical utility of the material that students can apply in their everyday lives,” McKinnon explained.

Throughout CA 260, McKinnon’s students explore topics like group communication by reading about communication styles in different cultures and how those styles impact workplace dynamics. Other topics include family communication, non-verbal communication, and rhetoric and rhetorical style. As they engage with these topics, students develop transferrable and practical skills, such as constructing arguments and writing about research in accessible ways.

“One of the things I like most about teaching this course is the practical utility of the material that students can apply in their everyday lives.”

Redesigning the Writing Assignments

When she initially began teaching the course, McKinnon used the assignments designed by past instructors. In those past courses, the final writing assignment required students to use scholarly research to make an argument about communication like “the success of human communication is highly contingent on the audience.” Other shorter assignments in the course asked students to write research précis based on scholarly articles, which helped them better understand the course material.

However, after noticing that some students in the course felt overwhelmed by these research projects—because they sometimes believed they needed to be experts in study methodology and data analysis to succeed—McKinnon and her team of teaching assistants redesigned the assignments as they began collaborating with REACH. These new assignments required students to synthesize complex scholarly material and communicate it to a non-academic audience. The new assignments include (1) a press release, (2) a grant proposal, (3) a human interest story, and (4) an advocacy speech. Students are required to revise each assignment at least twice, and in doing so, they practice writing and skills that are applicable to future courses.

Reflecting on these changes in the writing assignments, McKinnon clarified that “the current class has maintained many of the same learning outcomes of the original version.” She explained that for these newer formal writing assignments, students “still need to synthesize scholarly sources,” but their task is “to translate that material for a different audience.”

Developing Transferable Skills

For each of the assignments, students imagine themselves in a certain role. For the grant proposal, for example, students imagine themselves as researchers who are applying for funding to pursue a research project. The project is one they all read about in an assigned scholarly article. In the proposal, students have to convince the funding organization that their research on “tensions in stepchildren’s communication with a nonresidential parent” is necessary and important, as well as aligned with the funding organization’s priorities.

Through describing the study’s primary research questions, background and rationale, research methods, anticipated outcomes, and alignment with the foundation’s priorities (provided by McKinnon and her course TAs), the goal for students is to demonstrate their “comprehension of communication research studies and ability to explain studies clearly and persuasively to others.”

To assist students as they plan to write, draft, and revise in these four different genres, McKinnon provides models of each genre, clear instructions on writing in each genre, and detailed evaluation criteria that describe and weight the most important features. Students familiarize themselves with the criteria by working with classmates during peer review.

“People don’t write in isolation and all of us who learn to write do so as part of a community, so learning how to give and receive feedback is critical.”

Peer Review, Writing Workshops, and Case Studies

Explaining the rationale behind the writing workshops and peer review process, McKinnon noted that it is important for students to understand that “People don’t write in isolation and all of us who write do so as part of a community, so learning how to give and receive feedback is critical.” In the course’s writing workshops, which occur in small discussion sections after students have turned in a first draft, TAs offer individualized support to help students improve various aspects of their writing.
During these workshops, students also engage in peer review with a partner. To help students provide substantive feedback to their partners, McKinnon and her TAs have developed criteria with guiding questions as shown below. Following the workshop meetings, students use their peers' feedback to revise their work. After revising, they are expected to clarify why they used, or did not use, certain peer feedback in their final draft submitted to course TAs.

Writing also plays a significant role in the collaborative learning happening during the whole-class case study discussions that occur every Wednesday. Before those discussions, students complete online lessons on Canvas and read research articles about concepts like *narrative rationality* (i.e., the idea that stories are not all equally compelling and that we evaluate stories based on their coherence and fidelity).

During those discussions, students apply theories and arguments to discuss particular cases, like fake news controversies, in small and large groups. After these whole-class discussions, students submit a brief write-up in which they demonstrate their understanding of course concepts and ideas by applying them in critical and creative ways.

For example, for *narrative rationality*, students are asked to write a brief fake news story and explain how their new understandings of narrative rationality influenced their stories. Informal writing exercises like this are collected, but instructors give only minimal feedback. Nonetheless, these exercises help students deepen their understanding of complex course concepts.

**Student Enthusiasm in an Active Learning Environment**

For McKinnon, something she enjoys most about the course is students’ enthusiasm about the material and discussions. She explained that “Most of these students are sophomores so they are very enthusiastic and engaged, which has made the class so fun for myself and my teaching assistants.” By working with REACH, McKinnon and her team have created an active learning environment that engages students and helps them develop as critical thinkers and writers.

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**Peer Review Questions for the Grant Proposal in Comm. Arts 260**

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<thead>
<tr>
<th>Grant Proposal: Peer Review</th>
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<tr>
<td><strong>Criteria</strong></td>
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<tr>
<td><strong>Your partner’s proposal: Primary research questions</strong></td>
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<td><em>Does first section clearly outline research questions? Do questions effectively convey what the research addresses?</em></td>
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<td><strong>Your partner’s proposal: Background and rationale</strong></td>
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<td><em>Can you underline the author’s rationale for this study and background on why it is necessary? Is this rationale clear and explicit? Does the rationale explain how this research builds upon existing research?</em></td>
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<td><strong>Your partner’s proposal: Foundation priorities and research activities</strong></td>
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<td><em>Does the author describe how the study aligns with the foundation’s funding priorities? Does the author describe the study’s research methods? Are these explanations clear and appropriate?</em></td>
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<tr>
<td><strong>Your partner’s proposal: Study outcomes</strong></td>
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<td><em>Does the author describe what data and/or outcomes are expected? Do those outcomes make sense and/or are they what you might have expected?</em></td>
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<td><strong>Your partner’s proposal: Continuity</strong></td>
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<td><em>Do the key research questions and the body of the grant proposal match and/or make sense together? Does the grant proposal flow as a piece of writing; do the separate sections hang together?</em></td>
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<td><strong>Your partner’s proposal: Strengths</strong></td>
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<td><em>What two things did you find best in the proposal?</em></td>
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<td><strong>Your partner’s proposal: Improvements</strong></td>
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<td><em>What are two things that you suggest for improvement?</em></td>
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<tr>
<td><strong>Your own proposal: How will you incorporate your reviewer’s feedback?</strong></td>
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<tr>
<td><em>Please describe how you will take your peer reviewer’s comments into consideration for your final version.</em></td>
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Preparing Students for Scientific Research with Writing Assignments and Peer Review, Continued

And an undergraduate student wrote a paper that helped her strengthen her graduate school application. Her research was recently published in the *Proceedings of the National Academy of Sciences*, and she will be starting graduate school in the fall. “I set out to make this class useful for graduate and undergraduate students, and I am really pleased with how it’s turned out so far,” Sharma explained. He looks forward to seeing how his students grow as scientific researchers by practicing the critical activities they encounter in Zoology 957.

One of the Six Evaluation Criteria for Writing Assignments in Zoology 957

*Use of literature.* Are postulates appropriately supported by literature citations? Do citations follow a consistent format? Are all key studies germane to the topic included in the references list?

Rank 1. Writing is missing key references or incorrectly summarizes cited works; multiple postulates lack citations; inconsistent citation format mixes footnotes and endnotes, to adverse effect.

Rank 2. Most of the relevant literature is appropriately cited; only a handful of missing references limits the completeness of the literature review.

Rank 3. Writing demonstrates masterful command of the literature; all citations follow a consistent format.

The Writing Fellows Program at UW-Madison

Writing Fellows are talented, carefully selected, and extensively trained undergraduates who serve as peer writing tutors in classes across the College of Letters and 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 turning papers in for a grade. Building on the special trust that peers can share, Fellows not only help students to write better papers but also help students take themselves more seriously as writers and thinkers.

Fellows are equipped to tutor writing across the Letters and Science curriculum. In the past, they have worked with students in astronomy, Afro-American studies, history, philosophy, political science, chemistry, classics, English, gender and 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 occasionally 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!

To learn more about Writing Fellows or apply to work with a Fellow in a course you are teaching in Fall 2018 or Spring 2019, please contact us.

Emily Hall, Director of the Writing Fellows Program

ebhall@wisc.edu

263-3754

or -

Brad Hughes, Director of the Writing Center and the Program in Writing Across the Curriculum

bthughes@wisc.edu

263-3823
Thanks to Our Spring 2018 Communication-B TA Fellows!

Honored for their outstanding teaching in Communication-B courses, these three TAs helped plan and lead the Spring 2018 training in Writing Across the Curriculum for more than 40 new Communication-B TAs from across campus.

Thanks for your incredible work!

Anna Beck
Geography

Antía González Ben
Music

Taylor Wahlig
Biocore