

ACADEMIA CJ MAGAZINE

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Are your
students even
interested in
what you have
to say?

The answer
probably won't
surprise you!

The mysteries of the
universe:

*Why we're pretty
sure we've got that
shit locked down*

Turtlenecks: always in style, or
fashion disaster?

Your Lab Report Sucks

How Writing Centers and Science Students Can Work Together To improve Professional Writing In the Fields of Physics, Chemistry, Engineering and More

Writing centers in academic institutions are typically believed by students and faculty alike to only be applicable to such course work as freshman English, creative writing, lower-division history and philosophy courses, &c. In the minds of chemistry, biology, and engineering faculty members, writing centers might as well not exist at all. This is a travesty. Excellence in writing is a skill that encompasses *every single discipline*. From journalism to medicine, from aerospace engineering to screenwriting and everything in-between, professionals are expected to produce works of writing in one form or another in an intelligible and relevant manner.

In January of this year, Robert Weissbach of Indiana University and Ruth Pflueger of Penn State

Eerie collaborated on a project designed to improve the quality of student lab reports in the engineering program by making use of the existing staff in the writing center. Weissbach, an engineering professor identified two major contributing factors to the poor quality of student lab reports. First, engineering faculty, especially those teaching upper division courses, do not have time to instruct students in proper writing technique (Pflueger, Weissbach). The in-class time that they have with students must be devoted to the subject material since it is both complex and dense, and the lab time they have must be dedicated to the lab procedure since the projects are time consuming and the amount of time that students have in lab is limited. Second, engineering students have little desire to seek out assistance for their

writing. When interviewed regarding this, the authors report that tutors attempting to work with the engineering students were met with comments like “I just want to get out of here, quick” (Pflueger, Weissbach). This is not the attitude with which students ought to be coming in to a writing center.

For their joint research, Weissbach and Pflueger devised a system that drew on the existing staff of the writing center and required no additional funding from the institution. They first designed a training module for tutors that briefly explained the mechanics of engineering lab reports. This training was incorporated into tutor staff meetings at the beginning of the semester. Second, they created a checklist and rubric for tutors to fill out that would be turned in to the lab instructor with the report. This rubric included general guidelines such as “Report should be written in the third person,” and more specific ones such as “Watch for run-on sentences.”

The results of this experiment were reported as being overwhelmingly positive. Tutors, students and faculty were all asked to fill out surveys at the end of the test semester. Students reported gratitude for having the opportunity to improve their skills in a tangible way, faculty reported a significant quality increase in lab reports, and tutors reported a



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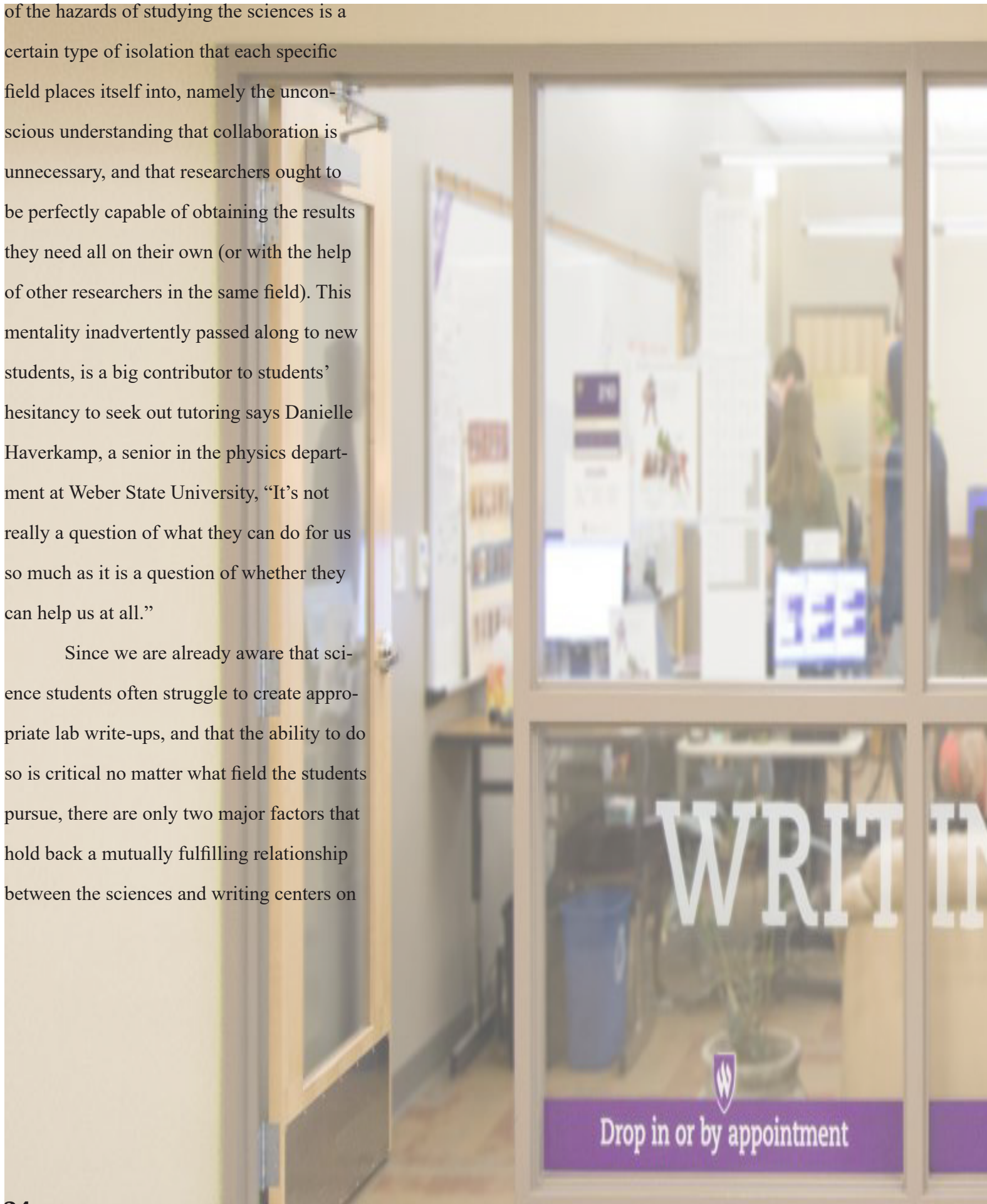
deeper understanding of a field that they were not necessarily a part of (Pflueger, Weissbach).

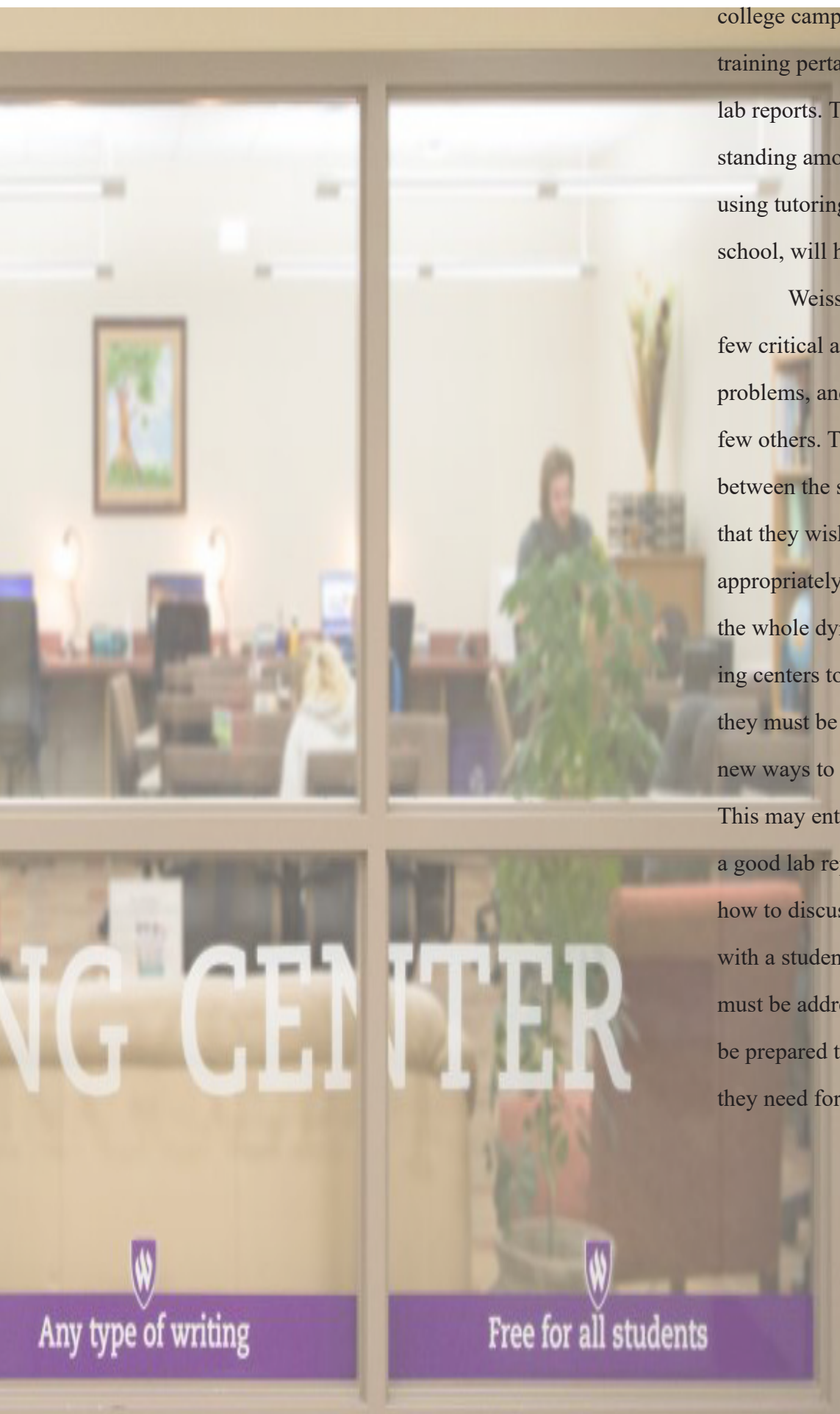
Kate Kiefer of Colorado State University and Aaron Leff of Front Range Community College also investigated this same type of interaction between composition and the sciences. Rather than relying on tutoring to assist students in developing their writing skills, however, they proposed that the university offer an upper-division writing course geared towards science majors. Their study yielded much the same results as far as student reception and faculty appreciation (Kiefer, Leff). Students in the sciences need to be proficient and professional in their writing if they wish to succeed in their careers.

It may be difficult for science majors to take writing centers seriously. After all, the “soft sciences” do not bring much to the table as far as technological or medical advancements. One

of the hazards of studying the sciences is a certain type of isolation that each specific field places itself into, namely the unconscious understanding that collaboration is unnecessary, and that researchers ought to be perfectly capable of obtaining the results they need all on their own (or with the help of other researchers in the same field). This mentality inadvertently passed along to new students, is a big contributor to students' hesitancy to seek out tutoring says Danielle Haverkamp, a senior in the physics department at Weber State University, "It's not really a question of what they can do for us so much as it is a question of whether they can help us at all."

Since we are already aware that science students often struggle to create appropriate lab write-ups, and that the ability to do so is critical no matter what field the students pursue, there are only two major factors that hold back a mutually fulfilling relationship between the sciences and writing centers on





college campuses. The first is a lack of tutor training pertaining to technical work such as lab reports. The second is a lack of understanding among students of the value that using tutoring resources, while they are in school, will have throughout their careers.

Weissbach and Pflueger explored a few critical areas of the solutions to these problems, and Leff and Kiefer explored a few others. The aspects of the relationship between the sciences and writing centers that they wished to address were addressed appropriately, but neither study encapsulated the whole dynamic. Rather, in order for writing centers to fully serve their student body, they must be constantly on the lookout for new ways to teach and new ways to grow. This may entail learning how to compose a good lab report, or it may entail learning how to discuss results and interpretation with a student. Regardless of what obstacles must be addressed, the writing center must be prepared to give all students the tools they need for success.