New research shows that short and simple writing exercises have the potential to help many of our students quickly and dramatically increase their grades and knowledge of course content.

By Tracy E. Robey

When considering the methods we could use to help students struggling in our classes, expressive writing that does not directly pertain to course content is probably not the first solution that comes to mind. Yet recent peer-reviewed studies published in *Science* by teams of psychologists show that guided expressive writing can help students improve their grades and learn more course content. Particularly for those who struggle to overcome anxiety and negative gender and racial stereotypes, writing exercises can help our students learn more and better demonstrate their knowledge on exams and assignments. These peer-reviewed findings are directly relevant to Writing Across the Curriculum (WAC) principles and concretely demonstrate how and why WAC helps students.

In four separate studies, researchers used specific writing prompts designed to help students overcome their anxiety, negative stereotypes about their own group, or connect course information to their lives in order to earn higher grades. The results were most dramatic for those students who were struggling in the courses. On average, underperforming students in the experiment groups gained 2/3 of a final letter grade compared to students in the control groups—simply by doing a few minutes of writing a couple of times during the semester.

The researchers who designed the experiments expressed amazement at the results. University of Colorado at Boulder professor of psychology Akira Miyake admitted, “It still amazes me that this writing exercise has such positive results.”

The counter-intuitive studies show that the inner thoughts of our students play a huge role in their success and learning. Certain types of writing can help students to replace negative thoughts that inhibit their success with nurturing positive thoughts that allow them to demonstrate what they actually know on exams and assignments.

In each of these studies, researchers used brief and simple expressive writing exercises to transform students’ attitudes and performances. Perhaps most remarkably, the psychologists demonstrated that the positive impact of expressive writing can spread to other courses and last long after the writing sessions.

To help you incorporate these proven writing exercises in courses at the College of Staten Island, the Writing Across the Curriculum/Writing in the Disciplines Program (WAC/WID) has created writing exercise worksheets based on those used in the successful experiments. In the following pages, we provide you with reviews of the experiments and instructions for how to use the writing exercise worksheets most effectively. Please feel free to photocopy and distribute these exercises to students and colleagues for in-class and independent use.

Please e-mail us (hilhldr@aol.com) to share your experiences with the worksheets and ideas discussed in this newsletter.

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Writing Away Anxiety

About the experiment: Researchers in the Department of Psychology and Committee on Education at the University of Chicago studied the effect of a 10-minute pre-exam writing exercise designed to relieve the anxiety of ninth-grade students about to take their first significant high school exam. While the experiment was conducting using ninth grade science students, the underlying concepts that inspired the study come from research on people of all ages who used writing to cope with trauma. Some pedagogical ideas don’t translate well between high school and college, but similar writing “interventions” based on psychology have been shown to help both college students and younger students, as demonstrated by the studies described on page four.

The results: For students who reported struggling with text anxiety, simply writing about their exam-related fears for 10 minutes prior to the exam resulted in an average grade increase from a B- to B+.

Why writing works: The psychologists who designed the experiment study why athletes, musicians, and students “choke” under pressure. They cited research that shows how writing after experiencing a trauma has been shown to lessen its impact. The psychologists designed the study to determine if writing before a stressful exam would allow anxious students to perform better due to relief from their worried thoughts. The researchers explained that the brief writing exercise helped the students with test anxiety to perform at the level of their less anxious peers by alleviating the impact of stress on their working memories, and thus performance. They believe that by writing about a stressful event like a test before it happens, the anxiety that some of the students felt was cleared from their working memories, leaving more space available during the test for test-related information.

How to use the worksheet: You can photocopy and distribute the worksheet on the facing page to students at the start of class before a high-stakes exam. Instruct students to read the instructions and write quietly for ten minutes. Let the students know that you will not collect their worksheets or look at their writing. You can also provide extra copies of the worksheet for students to take and use before exams in other classes, since the exercise will work in courses across the curriculum, and even when not administered by a faculty member.

Pre-Exam Stress Relief—10 minutes

Please take the next 10 minutes to write as openly as possible about your thoughts and feelings regarding the exam you are about to take. In your writing, I want you to really let yourself go and explore your emotions and thoughts as you are getting ready to start the exam. Feel free not to worry about spelling and grammar or how well written your answer is. You might relate your current thoughts to the way you have felt during other similar situations at school or in other situations in your life. Please try to be as open as possible as you write about your thoughts at this time. Remember, there will be no identifying information on your essay and I will not collect your responses—I cannot link your writing to you. Please start writing.
Writing Out Stereotypes

About the experiment: A study by researchers at the University of Colorado at Boulder Department of Psychology and Neuroscience demonstrates the link between short “values-affirmation” writing exercises and improved performance among women in college physics classes. This study was inspired by a 2006 article and follow-up study about values-affirmation writing producing significant cross-curriculum and long-term improvements in the grades of seventh-grade African American students.

The results: For women, especially those who most strongly endorsed the stereotype that men are naturally better at physics than women, two 15-minute writing exercises during the semester had significant results. The first writing exercise was given in class within the first four weeks of the semester, while the second was administered online toward the middle of the semester. The women and men in the experiment group selected their most important values from a list (such as relationships with family or gaining knowledge) and wrote about why they are important to them. Women in the control group tended to earn C grades, while those women in the experiment group on average earned grades in the B-range for the course.

In the study of seventh graders, values-affirmation writing produced a 40% reduction in the grade gap between African American students and their European American peers. While the writing exercise was administered in only one course, researchers noticed that the exercise equally impacted the students’ grades in every course. Overall, researchers found that African American students who wrote a few affirmation exercises raised their cumulative grades by .24 points (on a 4-point scale) in all of their classes. For lower-performing students, the results were even more dramatic: these students’ GPAs improved an average of .41 points. The psychologists returned to the students two years after the writing exercise experiments and found that even without continuing to do additional values affirmation writing, the gains in the students’ grades remained.

Why writing works: Affirming one’s own values helps students belonging to groups whose academic abilities has been negatively stereotyped to overcome “identity threat” and focus on their own interests and motivations rather than on the fear that they are unable to perform at a high level or that their failure to do well in class will lead to additional negative stereotypes for their group.

How to use the worksheet: We recommend distributing this worksheet once during class time in the first four weeks of the semester. Allow students 15 minutes to do the exercise at some point during class. Let the students know before they begin that you will not collect their worksheets. At some point toward the middle of the semester, you can provide the students with the worksheet again, but instruct them to do the exercise on their own at home.

The worksheet we provide was adapted from a description of the writing exercise used in: Miyake, Akira, et al. “Reducing the Gender Achievement Gap in College Science: A Classroom Study of Values Affirmation.” Science 330 (26 November 2010): 1234-1237.


Writing About Values—15 minutes

Circle two or three of the values *most* important to you:

- being good at art
- creativity
- relationships with family and friends
- government or politics
- independence
- learning and gaining knowledge
- athletic ability
- belonging to a social group (such as your community or school club)
- music
- career
- spiritual or religious values
- sense of humor

Write about why the values you selected are important to you. Focus on your thoughts and feelings, without worrying about spelling and grammar or how well written your answer is.

Look again at the values you selected. Write on the back of this sheet about the top two reasons why these values are important to you.
About the experiment: Researchers tested how writing could help ninth-grade students remember information they learned in their science courses. Those students who summarized science information and then wrote about how it applied to their lives learned significantly more than students who did not write or wrote more generally about course information without connecting it to their lives.

The results: Especially among those students who had the lowest expectations for their success in the course and enjoyment of science classes, researchers saw remarkable gains. By the end of the semester, these students reported more interest in science and received grades 2/3 of a letter grade higher than similar students in the control group.

Why writing works: The students in the control group wrote about the course content, but did not link it directly to their lives. This suggests that certain types of expressive writing are effective, while others may not yield measurable results. It seems that having students explain how science concepts covered in class impact their lives helps students to create new and personal memories of course information that they can access while taking exams and once the course is finished.

How to use the worksheet: The facing worksheet is intended to help students review material at the end of a unit or chapter. Allow students 15 minutes during class to complete the exercise quietly. You may or may not wish to collect the exercises—the activity does not require input from instructors to have the positive effect on student learning.
Life Relevance Review Activity—15 minutes

Pick one of the topics or concepts that we have covered in this class and briefly summarize the main parts.

Apply this topic/concept to your life, or to the life of someone you know. How might the information be useful to you, or a friend/relative, in daily life? How does learning about this topic apply to your future plans?
April 2011 Newsletter
Look for our next newsletter focusing on grammar issues!

Upcoming Faculty Roundtables

Student Grammar Problems Across the Curriculum--What to Do?
Faculty Roundtable
March 17, 1:30-3:30pm. 2S-217

Many of us—even those of us teaching in the English department—wonder how to address our students' grammar problems in their writing in a course that does not deal with grammar as a subject. Should we correct the grammar? How does it affect the grade of the student? What can we do to help students improve their grammar issues and finally get rid of some of the recurring problems in their writing? In this roundtable discussion we will showcase some of the ways in which the WAC/WID program has helped professors across the curriculum to address student grammar problems, mostly by giving students new methods of solving these problems themselves. Two teams of WAC writing fellows and WAC faculty—writing fellow Marisa Lerer and business professor Alan Zimmerman, and writing fellow Nichole Stanford and early childhood education professor Helen Robinson—will showcase how they addressed grammar problems in their classes. Please come and join us for a discussion of teaching grammar across the curriculum.

New Writing Resources for Students with Disabilities
Faculty Roundtable
March 31, 1:30-3:30pm. 2S-217

Join us the day before the start of this year’s Disability Awareness Month to discuss select strategies drawn from a new handbook on writing designed specifically for CSI students with learning disabilities and ADHD. The authors of the handbook—writing fellow Tracy Robey, Director of Disability Services Chris Cruz Cullari, and Assistant Director of Disability Services Sara Paul—will share some of the most innovative and exciting strategies from the upcoming handbook and provide handouts that you can use immediately with all of your students to help them produce their best written work.

Please let us know about your experience in using these research findings and worksheets with your students.

We welcome comments, questions or reflections on this month’s newsletter. Some responses may be published in upcoming WAC/WID newsletters.

You may send comments to Professor Hildegard Hoeller at hilhllr@aol.com.