

Writing as a Primary Means for Learning

Ruth Ann Atchley, Psychology

The abstract nature of a psychology course prompts a professor to use writing as a primary means for learning.

BACKGROUND

Psychology 613: History and Systems of Psychology combines history and philosophy with the field of psychology. The course is required for Ph.D. Clinical students and is an option to fulfill undergraduate psychology hours.

More than 1200 students major in psychology at KU, and any number of them might choose this class to fulfill their undergraduate requirements. These students are used to taking psychology classes in a lecture format that relies on true/false, multiple-choice tests. In such classes, the students encounter the material passively: the teacher explains, informs, stratifies, and decides on its value.

In the fall of 2003, I taught this course for the first time. The nature of its subject matter requires students to process abstract materials, not to memorize lots of facts that can be tested with multiple choice tests. Therefore, I found the typical method of passive learning described above to be an inadequate way for students to deeply learn the course ideas.

Project Notes

Course goals:

- How can I avoid pedagogical methods that are either subjective or dry, which is the only way I could envision lectures for this course?
- What type of learning activity will help students to be engaged with the materials and process the many ideas that form this area of study?
- What use can writing be in this scenario?

Why writing? Why not lecturing?

Before I taught this course, I tried to imagine what a lecture of this material would look like. It struck me as either being a painfully redundant replication of the text material, or it would end up delivering a very subjective view. I didn't think either of these two options—being extremely dry or biased—was workable. Because I couldn't imagine how to write a good lecture, I therefore needed a different teaching style.

This led me to consider sessions I had attended at the Center for Teaching Excellence about active learning, a more engaged method that I decided would be perfect for this kind of class.

Also, the psychology department had been having discussions about the relatively low amount of writing that psychology students do. I decided this would be an opportunity to hone their skills through lots of writing. Students could get iterative feedback useful for learning to write well.

The answer that I came up with after examining these ideas is: How do I write a lecture? I don't. How do I teach them to write better? I have them write.

Background update—Using rubrics

In the fall 2005 semester I used a rubric (see doc or pdf) in another course, 318: Cognitive Psychology, and I think it was a success. It made grading feasible and let the students know the standards. Here are two particulars on why I think it worked so well:

1. Pragmatic issues. The graduate assistants and I could grade papers in half the time that it would have taken without a rubric. The course started with 110 students and ended with 90; because we used the rubric, we could do all the grading without huge increases in time spent on the class.

2. Evaluation comments. Not a single person said anything about the papers being unfair or ambiguous, nor did anyone indicate there were any problems with grades. When nothing is said, that absence is significant. I think the rubric helped to create that positive scenario. I used it consistently throughout the semester. I asked the class during three class periods to pull it out and put it on their desk when they were writing. Anytime we graded, we always used its four categories.

The downside of using a rubric was that I had to explicitly tell the students to cite research for one paper. On a couple of occasions we moved away from the class literature, and then the students had to generate their own research or ideas. For those two instances, I had to indicate that the points for citing research would be modified to this category instead.

The students had to do two different but mutually helpful segments in class:

Part 1: A short answer, fill-in-the-blank question. This portion relied strictly on recall and came directly from the chapter readings, not from the lecture. Students needed to get three out of four of the questions right in order to do well. Over time, they got into the habit of reading material two to three times before they came to class. I saw evidence of this in their textbooks: they would have several layers of highlighting. After the quiz was finished, we would open the books and proceed with class.

Part 2: The in-class writing. Having two segments meant that students had to do well in both areas (the short answer and the writing). They commented that if they didn't do well on the short answer, they wouldn't do well on the writing. Therefore, recall was important.

The students had to realize they were learning too much in a short amount of time over too many topics to not do the readings. It was important that they became aware of this, for they are often not used to having to study. This course topic isn't for everyone, and with over 110 students, it's a big, tough class. I like teaching it because it is my area of expertise (cognitive psychology).

Course syllabus

Psychology 613 & 805 History and Systems in Psychology

Instructor: Ruth Ann Atchley, PhD.

Contact information: ratchley @ku.edu, office hours: 11-12:30 TR

Course: 1-2:20 TR in 547 Fraser Hall

Textbook: An Introduction to the History of Psychology, Hergenhahn (2005)

Course goals:

This course is designed to allow you to examine the history and philosophical ideas that have influenced the development of the scientific field of psychology. Most psychology courses you will take are designed to help you understand the human mind and human behavior. This class is very different. In this class we will study the field of psychology itself. This endeavor will be challenging in part because as psychology students we are all very used to studying theories and data and trying to explain how and why the human mind works the way it does. Here we will look at the history of how humans have tried to understand other humans. This will include the study of influential theories such as functionalism, behaviorism, or Gestalt psychology, but we will not argue the relative merits of these theories based on experimental data. Instead we will learn about the scientists that developed these theories, the context in which the theories developed and the subsequent modifications that were made to each theory. Thus, this course is more of a history or philosophy course than a traditional psychology course. But understanding this material will benefit anyone that wants to be a professional in the field of psychology.

Your responsibilities:

Because this course is so different in content from your usual psychology class it must also be different in its format. A traditional lecture format would not be a very effective way for you to learn this material. Mastery of this material, given its philosophical nature, will only happen if you have a chance to think, write, and talk about these ideas and theories. Therefore, in each class period I will keep the lecture to a minimum (only about 20 minutes). The second part of class (about 15 minutes) will be taken up with writing about a topic from the course material. You will be writing almost everyday in this class. So this means that you must always come to class prepared. If you do not read the material the night before, you can not write about it in class. Finally, the last and probably most important part of the class period will be spent in discussing the ideas that you have been writing about. Each day, students will read to the class what they have been writing and we will discuss the material. Everyone should be able to participate in this discussion, because everyone will have been writing on the topic of discussion.

Course grading:

Bi-weekly essay assignments (10% per assignment) 70%

Class participation 15%

Final essay 15%

Bi-weekly essay assignments:

Each class period you will be writing a short essay on a topic from the course material. On every other Tuesday you will be asked to turn in an assignment that draws on what you have written in

these previous in-class assignments and on your notes from the in-class discussion in order to answer a more extended essay. Because the questions will be based on the writing and discussion from class you should make sure you reference your earlier writing during these bi-weekly take-home assignments. When I grade I will look most closely at the following aspects of your answer:

- (1) I will be evaluating if you fully understand the issues and ideas that you read about.
- (2) I will be judging if you incorporated the ideas introduced in the in-class discussion.
- (3) I will be evaluating the general clarity of your writing.

Final essay assignment:

The final essay assignment will be composed of 2 or 3 essay questions that will require you to discuss issues that span the full semester. These final essays will focus on more global issues that were discussed throughout the semester.

Key dates in the semester:

Aug 19: First day of class

Sept 7: Essay assignment 1 due

Sept 21: Essay assignment 2 due

Oct 5: Essay assignment 3 due

Oct 14: no class (Fall break)

Oct 19: Essay assignment 4 due

Nov 2: Essay assignment 5 due

Nov 16: Essay assignment 6 due

Nov 25: no class (Thanksgiving)

Dec 9: Essay assignment 7 due

Dec 16: Final essay due

IMPLEMENTATION

Pre-planning: I consulted with Michele Eodice, Director of the Writing Center, and Dan Bernstein, Director of the Center for Teaching Excellence. They helped me develop goals and generate ideas, both for the overall semester and on a day-to-day basis.

Beginning of the semester: I told the students of my plan to make this a writing-intensive course in order to help them process this abstract material. I asked for their ideas and feedback.

Feedback: The primary feedback came from me, as we tried peer editing but found it problematic. I give lots of detailed feedback on every paper, but particularly on the first two assignments.

Units and final: Every two-week unit culminated in a one-page paper. The students had the entire class period to write this. The final paper was a take-home, two-page paper that synthesized the semester's ideas.

Project Notes

Consulting others

On the first day of class, I involved the students by explaining to them that this would be a writing-intensive course and suggested that they consider dropping if that was not what they wanted. I told them straight up that they would need to write, talk, and be prepared for each class. Ten of the students dropped the class. Of those who gave reasons for dropping, they said that they hated to write, that they wouldn't be able to give the class enough time, and that it was too much work for their expectations.

We used the entire second class period to again discuss the writing portion of the class. I asked them to help decide what the goals for writing should be, what the writing should look like, what the grading scale would be, and what the outcome from the writing should be.

All agreed that they needed help on being concise. They decided that they didn't care about spelling, which I readily agreed to, as I'm a poor speller. We discussed the value of content versus conventions. Also, I explained a priori what I was looking for in the writing, such as what I mean by "vague" writing.

We decided together on the priorities, which I thought was very important. I was open about what I was trying to do, and these weren't didactic sessions with me as the authority figure that they had to listen to.

We spent another half day discussing the plans that we had made, which included the rubric we'd created with Michele Eodice, director of the Writing Center. This means that they had two and a half days of purposeful discussions of the writing aspect of the course, and they were included in the decisions regarding it.

On the first paper, I did not issue a grade, a surprise, as I had not told them ahead that it wouldn't be graded. I suggested instead what level their writing was at. On that paper, I did extensive grading where I fixed every single sentence.

Although we started with a rubric, we found it was too limiting for the number and variety of writing assignments. The students and I together decided on a simple grading plan. Each assignment gets a possible ten points: four for answering the question fully, three for the factual correctness of the answer content, and three for clear, concrete, and concise writing style (or one point for each of these qualities).

Information on feedback

The relationship between writing and learning happens over the course of a semester. I don't have evidence yet, but I have observed that when students are forced to write a very concise answer to a relatively broad question, that those students who understand the concepts can write concisely. Conversely, when they don't understand the concepts, their writing becomes vague, flowery, unclear or imprecise. Therefore, my interpretation is when someone writes a fluff sentence, they don't understand the concept.

I believe this means I need to demonstrate what concise writing looks like. On the first two assignments, I give very detailed feedback. On the first assignment alone, I often spend half an hour on each paper. (I comment on every assignment that they turn in.)

We tried peer editing: I distributed unnamed papers randomly and another student commented on it. They hated it. We didn't use peer editing after that. While I can live without peer editing, it would be helpful for students to get good feedback and to know what aspects are important to look at. Peer evaluations would also help lessen my grading load, as it does take a lot of time to make comments.

Why don't students like peer editing?

1. The students accurately identified that the peer feedback was variable in quality. They felt that the comments they received were hit or miss—that is, some comments were helpful, others not at all. For instance, some comments reflected no attention to the writing or showed a lack of understanding of the material. To fix that, one must do something to improve peer-editing ability. The students wrote notes on the papers without following any set form. Thus, they had no guidelines, no specific details that they could latch onto. Writing is composed of so many aspects that it's possible no two editors focused on the same priorities. Improving the quality of responses will involve showing students how to focus on someone else's skills, and I haven't provided enough help with that area.
2. Students don't value other students' opinion or thoughts as much as they do the instructor's. I think that there is a general reticence to believe peer comments. Students do not respect these because they see no valuation of expertise and thus they view them as neither useful nor informative. In fact, their higher valuation of instructor comments influences lots of components in getting students involved. I've worked on this issue in a couple of ways. First, I've sought advice from places such as the Center for Teaching Excellence. Second, I'm reading a book on teaching that has a section on peer editing. The final note for now is that I plan to return to this issue after the students have had time to read my comments on several

papers. I want to get them to a point where they'd seen enough editing from me that they could tackle peer editing through my ideas. I plan to re-introduce peer editing after mid-term when I believe they will have had that exposure.

3. Peer editors need to give more effort to peer editing, and they don't at the moment because they aren't being evaluated on it. I sensed that they were often doing the peer editing a few minutes right before class. If they give little time to peer editing, it won't help anyone.

Plans for next time:

1. Build an evaluative process into peer editing. Having students do multiple peer editing of the same paper could augment this: by seeing other's comments they would have a means to consider what goes into a good peer editing job.
2. A greater reward structure or a better means to evaluate peer editing. Again, I haven't had time to address this yet.

Units and final

For the unit papers, the students could use their class notes over the lecture and discussions and their earlier writing assignments. However, they could not use the text. I felt that this made them move from the book to something that they had written, and then to synthesis those ideas into another paper, thus creating a double layer of material synthesis.

Each paper had two prompts. I made one more difficult than the other but did not label it so. Generally there was an even division of participants for each topic, which surprised me. I believe they picked the prompt based on their personal interest in its ideas.

If they went over the one-page limit, I did not accept that paper. I thought that created a forced conciseness, which led them to clarify and focus their thinking and writing.

See samples as follows:

Units

In-class writing assignments leading up to Writing Assignment 3

- Compare and contrast the ideas of Primary and Secondary Qualities as discussed by Locke, Berkley, and Hume.
- Please discuss Condillac's analogy of the sentient statue. Use this analogy to describe and explain the important tenets of British Empiricism and French Sensationalism.
- Many psychologists prefer to recognize the rationalists as being the most influential "forefathers" in the development of critical psychological concepts and theories. Please review so of the concepts proposed by the rationalists that have contributed to the field of psychology.
- Please define the philosophical terms of active mind vs. passive mind. In considering both Wundt and Titchner, what would be each psychologist's position on this question of whether the mind is active or passive? Be sure to provide evidence for your arguments.

Take-home Writing Assignment 3

Grading criteria:

4 points for answering the question fully

3 points for the factual correctness of the answer content

3 points for clear, concrete, and concise writing style

10 points total

Please choose one:

1. Wilhelm Wundt and Edward Titchener were both extremely influential early experimental psychologists and yet strikingly different in some aspects of their approach to the new field of experimental psychology. Wundt is said to have been primarily influenced by the rationalists and Titchner was more influenced by the empiricists and positivists. What aspects of each psychologist's approach to experimental psychology support this characterization of his philosophical bias? In your answer please discuss individually Wundt and Titchner's ideas/assumptions and the relationship of these ideas to rationalism and empiricist philosophy.

2. Which philosophical school, Rationalism or British Empiricism, has had more influence on the development of modern psychology? In making your argument, please be sure to include the following information:

- Briefly outline the primary tenets of the philosophical approach that you think has been most influential.
- Provide specific instances and examples that support and illustrate your arguments.
- Explicitly explain why you think the other philosophical school has not been as influential.

Final

Final Writing Assignment

Please answer two of the four questions below. As I indicated in class, you can use any materials from class to answer these questions (including your textbook). But do not talk with your fellow students or other people about your answers. Please stick to the two-page limit for each of your answers. And please submit your answers, via email (ratchley@ku.edu), by the end of the day on Tuesday, 12/16.

Grading criteria for each answer:

4 points for answering the question fully

3 points for the factual correctness of the answer content

3 points for concrete, concise, and precise writing style

10 points total

1) As we have learned about the history of psychology, at many points philosophical dichotomies have developed that have significantly influenced thinking about Man's mind, brain, behavior, and capacity for knowledge. Please review one of these important dichotomies that has affected thinking in the field of psychology. Define and describe the competing sides in the dichotomy you are reviewing and explain how each side has influenced the field of psychology.

2) Select one individual in the history of psychology who has had the greatest impact on the development of psychology as an empirical science. Describe the contributions of the individual you have selected and provide reasoning for why you think that this particular individual has been most influential in pushing experimental psychology towards being an empirical science.

3) What is epistemology? Please briefly review the primary milestones in the history of psychology that have influenced our thinking on epistemology. Also please define and describe your own personal epistemological philosophy.

4) What is free will? First, please define this concept as it has been used in the history of psychology. Secondly, please review three independent theories in philosophy or psychology that address in some way the issue of free will and explain how, in these theories, free will can influence human behavior

STUDENT PERFORMANCE

Every single student's writing improved. This has not happened in any other class I have taught.

The content appeared to be learned as well as would occur in a lecture setting. In their feedback, students insisted that they learned a great deal. But I am still unsure what can be used to objectively measure their learning.

I can't create a mastery list, as this material doesn't lend itself to single answers. There is no concrete material that I can scrutinize, and as a neuroscientist used to teaching facts, this is disconcerting. I don't think that I will ever be 100% confident of the success or outcome from this method of teaching.

When students are forced to write a very concise answer to a relatively broad question, students who understand the concepts can write in a clear, comprehensive manner. Conversely, they don't understand the concepts, their writing becomes vague, flowery, or imprecise.

Project Notes

Samples of in-class writing assignments

First in-class assignment:

According to Kuhn, what is science? Discuss how Kuhn and Popper differ. And give an example from psychology that can be seen better support for either Kuhn or Popper.

Check "First in-class" for a sample response to this writing prompt.

In-class assignment given between the first one and mid-term:

Describe the philosophy of the Sophists. Where do the Sophists fit into the dichotomy between empiricism and rationalism? Finally, what aspects of sophist philosophy became incorporated in the philosophy of Socrates and Plato?

Check "Between 1 and midterm" for a sample response to this writing prompt.

Mid-term in-class writing assignment:

Both James and Munsterburg are considered functionalists. And both psychologists had a huge impact on the development of the field of psychology. In what ways were these psychologists in agreement and what are some of the significant theoretical, methodological, and philosophical differences between these two early psychologists?

Check "At midterm" for a sample response to this writing prompt.

Check "Atchley at midterm" for the instructor's response, written in-class as students wrote.

Sample of two-week paper

Check "Two-week paper" for this file.

Vague versus precise writing

I often find whole paragraphs that are fluff, and I point this out to the students. In particular, when I do heavy editing on their earlier papers, I make an effort to let them know when their writing tells me nothing, nothing new, or nothing at all. These broad, non-specific sentences can

be very sophisticated, even from graduate students who can be very good at writing a lot of BS, but I want more. I show them in my comments where they can be more concise, more concrete, and more precise. Therefore, I point out where they have said something, and when they've said nothing with the intention that building detailed writing will indicate understanding of the material. I reward the precise—the writing that says something. I tell them not to write a sentence that doesn't provide content; when they can do that, I believe they understand the material.

The relationship between writing and learning happens over the course of a semester. I don't have evidence yet, but I have observed that when students are forced to write a very concise answer to a relatively broad question, that those students who understand the concepts can write concisely. Conversely, when they don't understand the concepts, their writing becomes vague, flowery, unclear or imprecise. Therefore, my interpretation is when someone writes a fluff sentence, they don't understand the concept.

The example below consists of the first paragraphs of two papers. Each writer examines rationalism, but one response offers a vague paragraph while the other response demonstrates a more precise reply. The vague paper says nothing and does not take a position because the writer didn't have one, which is a reflection of not understanding the concepts. See the attached PDFs for my comments on both papers, including the ideas that I gave to the writer of the vague paragraph for ways to increase its precision and my comments on content and wording to the more precise paragraph.

Vague paragraph: "To get to the point, I feel that rationalism has had more influence on modern psychology. This is mostly due to the 'active mind' that rationalists believe in. The active mind 'acts on information from the senses and gives it meaning that it otherwise would not have' (156). It seems like the part of the brain that is doing this 'acting upon the information' is innate. Humans will make associations between events and object without any conscious effort, therefore 'giving meaning that it otherwise would not have.' But even more than this, there is a structure to the way that humans encode information. In cognitive psychology there are models of how information is encoded. Hierarchies are drawn to show how people associate ideas from broad topics down to small characteristics of objects or other things, and although these are theories, there is support for them." (See "Vague sample")

Precise paragraph: "Rationalism has influenced modern psychology tremendously, and early rationalists like Spinoza, Leibniz, Kant, Herbart and Hegel are just a few who have contributed their ideas to psychology. Rationalists believed the mind was active, therefore it arranged the information gathered from the senses and detected intricate ideas and concepts that otherwise are not encompassed through sensory experience. Other important concepts of this approach include self-actualization, emotion and passion, alienation, threshold, and the idea of psychology being experimental." (See "Precise sample")

REFLECTIONS

What I learned from observing the class:

Students love the opportunity to write. They don't have to be convinced of the value of writing if they see the effort the teacher is putting in, as well as their own effort.

Everyone did the reading, everyone did the writing, and the students talked without prompting after the first few weeks. But, I am still confounded: This abstract, philosophical material makes it hard to gauge learning.

I am confident that I didn't hurt the students: They did as well as they would have with a lecture format, plus they received the bonus of writing well, so they came out ahead. Therefore, I will keep moving forward with this writing-intensive format.

What I'm doing to refine the course:

The biggest change that I'm making this semester is class length. By going to an hour and a half class, we don't run out of time for discussion.

I've changed the nature of my short lecture that begins each course. Instead of giving a chapter overview, I now include content pieces that expand the text.

At this point, I'm still considering what to do about peer editing.

Project Notes

Opportunity to write

Students love the opportunity to write, a positive outcome from this teaching. Although faculty have to do a lot of work in such a class, the students definitely see the value. They don't have to be convinced if they see the effort that the teacher is putting into it and their effort as well. This has been true for all levels of students, both graduate and undergraduates, who tell me that they are getting a lot out of the class and learning a lot. I believe that this is due to the writing. (The feedback in general has been good.) It's better than a ho-hum lecture scenario.

Gauging learning

The undergraduates gave highly favorable comments. Five to six said that this was the best course that they had ever taken. They liked the feedback on the papers, the close relationships, and the intense learning environment. However, it is hard to separate out the content versus the experience from this unique approach.

In the current semester, I have a 2:1 ratio of graduate students to undergraduates. (I had only two graduate students in the first course.) I hope that graduate students will have an easier time pulling the two issues apart. If so, they may be able to give more precise feedback. I think that the maturity and articulation skills of the graduate students will also mean better feedback.

Even though I wish that I had a black and white method of evaluating the learning that occurs from the intensive writing that students do, I do believe that writing helps them in several ways:

- Writing forces the students to read the material. In order to adequately answer the writing prompts, they would have to be informed about the text ideas.

- Writing provides a means for the students to process the material that is light on facts but heavy on concepts.
- Writing concise, limited papers on a daily basis improves the students' writing skills. It works to eliminate the fluff and filler that shows up in a page–dictated term paper.
- Writing every class period demonstrates its importance plus it make the students think and focus for a set, concentrated amount of time.

Class length

I purposely went from a 50-minute class to an hour and a half class the second time I taught this course. This longer class period leaves at least 20 minutes for discussion; sometimes before, we ended up with only a five to ten minute discussion period. I'm really glad that I did this, as I find it to be a positive change. It's critical to give students time to discuss. Their thinking gets expanded and broadened when they consider the material in another way: a multimodality approach really is best.

I don't know how well this discussion–heavy approach would work in class of 50 students. Last fall I had 25 students, two of whom were graduates. This fall I have 16 students, 11 of whom are graduates. The classroom has a diverse mixture of majors, including Indigenous Studies, Education, Psychology undergraduates, and graduate students in Clinical Psychology, which I was concerned would increase its chances of being fractionated. However, that has not happened. There is no feeling of a hierarchy or intimidation.

Short lectures

Last time I taught this, I gave a synopsis/overview of each chapter. Now I am including more content pieces that expand the ideas in the textbook or enumerate an idea only given scant attention. For instance, one recent lecture focused on Erasmus Darwin, Charles' grandfather, who had written a clear, concise prose on evolution. The text only gave him two sentences, so I used my lecture time as a way of illustrating his role in the sciences that influenced evolutionary psychology. I want to give the students information about people we don't hear about who are very influential on history.

I don't know if this change is good or bad. I think it's good because the students enjoy learning beyond the textbook. I think it might be bad because I don't clarify everything that's in the textbook, and I don't want to miss any important material. My belief for making this change was that graduate students can seek out more information and can read better, thus negating the need for me to repeat the text material in class. I can address broader implications instead.

I continue to include a lecture segment because I think it forms an anchor. For a piece of the day it seems like we have a "regular" class with a lecturing professor. It's a security blanket for the students. If I didn't do it, I think they'd feel adrift or in a foreign universe. Having me give a lecture provides students with some comfort and security.

Reflections update—Using rubrics

Student Feedback

The students gave suggestions on how to improve the writing assignments. One said to alternate in-class with out-of-class writing assignments; this is because sometimes all the material is covered before the writing takes place, and sometimes the lecture began on the second day of the writing assignments. I might take the suggestions of two or three students to make the first and second papers take-home, and after that place the writing back in the classrooms. Time spent writing is an issue in the early papers, and the students believed that having more time would make the first in-class writing more thorough. All the paper prompts call for the same length, but as the semester goes on, the amount of material the students include shrinks as they continue to work on condensation and clarity. I actually allow them to use more space at the beginning; additionally, I only allow one long paragraph (about three-fourths of a page) on that one page I require. I hold more strongly to the length as they continue.

Several students commented on the percentage of writing and its impact on grades. One suggested that the writing assignment pulled grades down when he or she had expected it would elevate the grades. Another asked me to consider reducing the percentage of writing that is graded. In a similar vein, a different student stated, "In-class writing assignments seem to be pulling my grade down, even though I read the material before class." However, I believe that in-class writing forced students to stay up-to-date, thus making it easier to test. Before I set this up, I had carefully looked at the total student output (writing, tests) that I would require. I think it is a wash: some of the students did better on one area, and others did better in another area. What I found important is that no one said anything negative about the writing other than to change the percentage of writing.

I believe that the writing assignments, along with the short answer quizzes, provided additional learning opportunities for writing and for retaining the lecture information. I think this is reiterated through other student comments, such as, "I liked the writing assignments even though I did poorly. They helped me prepare for the tests." Another said, "The weekly writing assignments helped make me read."

Future Uses of Rubrics

No matter what, closed book, short answer question writing helps. It's not done in a disciplinarian or punishment mode. The feedback this semester indicates that the questions made the students prepare for their writing. It makes sense. Even my worst critics didn't say anything negative about the overall writing; no one said dump the writing assignments. I will use writing without question every time. A rubric is a really good addition. It makes the writing process clearer and more feasible for everyone involved. This has taken time to develop, and after three to four years, I'm starting to feel that I'm getting the writing bit down.

As a teacher, using a rubric puts constraints on the class work to the points on the rubric. The upside of this is that it makes you pick, a priori, the most important writing and learning that you want the students to do. As a teacher, it helps you to focus. I have to decide on the short answer questions and the essay questions. The rubric that I developed, with the help of Michele Eodice, former Director of the KU Writing Center, is flexible and can be modified. Next semester I will teach Psychology 475, Cognitive Neuroscience, which is the methods of neuropsychology class, and I will use writing in it. Writing will be great. I'll have students do more primary readings

outside of class, and the rubric will change to reflect analysis and criticism of literature as opposed to conceptual understanding of topics in the textbook.

I also teach Psychology 370, Brain and Behavior, and I have decided not to add writing to it. Over the last eight years, I have been developing in-class activities for it that I think are a successful way to learn this topic's information. In this class, students have to do a great deal of memorization of concrete concepts. The students also tend to get the subject ideas without too much trouble.

For Psychology 318, in the past I had students do a presentation. This will now be the third time that I have taught it. The presentations take a great deal of time, and they equal the material that would be equivalent to one in-depth paper. Doing this amount of work only once is not enough. Writing will allow the students to hone more skills. Perhaps I will have them do one presentation at the end, but they will practice via writing throughout most of the semester.