# Teaching Writing for Psychology at Harvard

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HARVARD COLLEGE

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Table of Contents

Acknowledgements

This guide was designed to help you teach writing to undergraduates in the Psychology Department at Harvard University. Whether you are a teaching assistant, teaching fellow, instructor, lecturer, or seasoned faculty member, you will find information here that will be useful as you train your students to become better writers in the field of psychology.

While there are no hard and fast rules for teaching writing, there are a number of strategies, writing assignments, and feedback tips that may increase the effectiveness of your efforts and reduce the time you spend grading papers. Whenever possible we've discussed several strategies so that you can select the one that works best for you.

The guide is presented in two major parts. In the first part, we offer suggestions for talking to students about writing and for incorporating writing assignments into your course planning. Clearly worded assignments will provide preliminary writing instruction to students before they begin to write. In the second part, we offer suggestions for managing writing issues during the course itself. These issues include grading and providing feedback to students about their writing. We also include a "Trouble-shooting" section and a variety of appendices that we hope you will find useful. Many of these include our own favorite handouts and tip sheets.

Preparation for Student Writing: Writing Instruction and Designing Writing Assignments

As you design your course, you may be asking these questions:

- What kind of writing assignments should I include?

- How can I insure that students understand the assignments?

- Should I use class time to give students writing instruction?

- How can I avoid plagiarism before it starts?

This section of the guide involves those aspects of teaching writing that occur before students even begin their first writing assignment in your class. In this section we include a summary of types of writing assignments, suggestions for designing good, clear assignments, suggestions for discussing writing in class (before the first assignment) and suggestions to reduce the likelihood of plagiarism in your class. These are all topics that you will ideally consider even before the first day of class.

Types of Writing Assignments

An important aspect of the design of your course involves selecting the appropriate types of writing assignments. If you teach sophomore tutorial, a huge part of your goal is to help your students learn to write their first academic psychology papers. They need to learn what academic writing looks like and probably need to focus on the fundamentals. If you teach more advanced classes, you may be more interested in using writing as a way to assess students' understanding of the weekly readings, to provide insights for a class discussion, or to have students extend their knowledge by completing a term paper. These different goals will result in very different types of writing assignments. Below you will see a list of some of the most common types of assignments and a discussion of when each type of assignment might be useful.

Discussion Questions

One type of assignment you might consider is to ask students to write 2–3 discussion questions each week. These are particularly useful in classes that involve reading journal articles and in seminar-type classes. You or a student discussion leader can use these questions (if they are submitted in advance of class) to structure the class discussion. Typically instructors will ask students to either write discussion questions or response papers (see below), but not both. Discussion questions provide you with an opportunity to see what questions students have, which topics they found interesting or confusing, and allow you to be sure that students have at least thought a bit about the week's topic.

One limitation is that it can be tricky to ascertain whether students actually read the readings fully or just skimmed the abstracts, especially when they write broad questions. It is often useful to provide students with examples of good and bad discussion questions along with an explanation of why these are good or bad. Some instructors like students to try to connect multiple readings from one week or across weeks in their discussion questions, while others prefer students to point out their own actual questions—things they didn't understand or things they wondered about.

Response or Reaction Papers

Many instructors consider assigning a response or reaction paper. This is a one- to two-page position on the readings for a given week. Some instructors assign a specific question based on what they consider important implications of the readings; others leave the topic for the paper to each student. Often instructors have students share reaction papers with each other before class (easily done simply by having each student post them directly to a discussion on a class website or wiki). Typically APA style is required for textual references and papers are double-spaced with appropriate margins, but no other formatting requirements are imposed. Response or reaction papers are helpful if you are interested in assessing how well students understand a set of readings, or to understand what topics within a week's readings are most confusing or interesting. Finally, different instructors have different strategies for grading these (usually) weekly papers. Some instructors use a pass/fail system, others assign √+, √, or √– , and still others give exact grades each week. (See the section on Grading later in this guide.) Regardless of which grading system is used, students should understand what constitutes a good paper ahead of time. This can be accomplished by providing an example of a high-quality response/reaction paper prior to the due date of the first assignment.

Below are examples of two reaction paper assignments. Notice that one Assignment 1 provides a great deal of information for students who may not have experience with reaction papers, while Assignment 2 is more appropriate for upper level courses and students who have experience with this type of paper.

Sample Reaction Paper Assignment 1 (from Chris Soutter)
Reaction papers in this class are short (1-2 pages, double-spaced) syntheses of a week's worth of readings along with *some conclusion* that *you* propose as a result of the readings.

Though you need to bring *each* reading into the paper, don't fall into the trap of trying to summarize them; just bring in at least one key point from each reading, without getting stuck on reporting everything.

How do you decide what points to include? That's the key to a reaction paper. Do you see any common threads among multiple readings? If you find any contradictions among them, that's wonderful – that gives you a great approach to the material! You can lay out one author's argument, and then the other's. *Your* contribution will be the way you play referee. Even when there aren't contradictions, there are usually implications worth pursuing. Take the notes you made on key points, and ask yourself "*so what*?" Why do we care? See if you can figure out the psychological consequences if that finding is correct. Sometimes the finding itself is minor but the potential consequences for science are mind-blowing. Finally, please don't try to fit *all* these suggestions into one paper! A reaction paper is short. Do a good job of representing *something* true and important about each reading, and try to tie it all

together into a single opinion you can convey briefly in a scientific, not journalistic, tone. Post your papers (see a later e-mail for instructions), and read everyone else's papers so that you see what should be a very broad range of intriguing ideas. Then come to class prepared to discuss how we can merge them all into a fascinating exploration of the workings of memory!!

Grades: √, √- or √+. Difficulties at the beginning won't have much effect on the term grade, as I give credit for improvement.

Sample Reaction Paper Assignment 2 (from Shelley Carson)

Each week I will present a question related to the week's lecture topics. The Weekly Question will also be posted on the course website. You will be required to write reaction papers for eight of the twelve Weekly Questions. Each paper will be 1–2 pages double-spaced and will reflect your personal reaction to the weekly question as informed by the assigned readings. Please use APA format for all citations and references. Papers will be due by 1 pm on each Tuesday for the previous week's question and will be graded √+, √, or √-. Criteria for grading will be based on 1) evidence that you have read and understand the assigned readings, and 2) evidence that you have thought deeply about the question and its consequences. If you receive a √-, you will be asked to rewrite the reaction paper in order to receive credit for it.

Short Essays or Unit Papers

Some instructors assign a unit paper or short essay at the end of each topic covered in the course. These may be in lieu of, or in addition to, weekly reaction or response papers. Others assign unit papers selectively or let students choose which of several units to write about. This provides students the opportunity for graded feedback on a more formal paper covering a limited set of readings before they undertake a larger term paper (if one has been assigned). In some classes it may be desirable to have several short essays in lieu of a large term paper, while other classes may be better suited with just one or two larger papers. The unit papers provide students an opportunity to develop a larger idea than is possible in a weekly response paper; they may also allow the student an opportunity to do some research beyond the class readings. Unit papers or essays also allow you to assess which students may need more help with their writing and provide you an opportunity to give feedback without waiting for a final, end-of-semester paper. If assigning smaller papers is part of a goal to help students improve their writing, it may be particularly useful for you to allow students to correct their initial drafts in order to provide them with an opportunity to incorporate your feedback and to get experience succeeding in writing improvement.

Sample Short Essay assignment (from Chris Soutter)

For this assignment, you will write a short essay (5–7 pages, double-spaced). The point of the short essay is to take and defend a position of your own on the body of work covered in the unit on emotions and memory. Unlike reaction papers, the short essay must be prepared using APA style (see the APA Publication Manual). The key to a successful short essay is to decide on a main point and make it not just the focus but actually the entire organizational framework for the whole paper. To support your point, use information from the assigned readings (do not bring in information from outside sources). You'll need to make arguments about how the evidence from the readings should be interpreted and why such interpretations lead to the point you're presenting. You'll need to bring in **all** the readings from the unit in some way *–if they*

don't support your point, then say why, and say how you think that lack of support affects your arguments! But don't just rehash the readings. Bring them in where they belong as part of the logical structure of the exposition of your point.

Needless to say, a successful short essay is also well written. It relies on scientific tone (rather than conversational tone or didactic tone). It avoids claims that cannot be supported, but uses instead phrases such as "this suggests" or "author x found y" rather than "this proves" or "y is true." It argues for what might be, recognizing that an answer cannot be found without controlled experiments and that the best the paper can provide is a suggestion of where it might be productive to do further research. And it provides a clear introduction describing exactly what will be covered in the paper (don't hold your fire until the end - tell all now, at least the outlines of it!), as well as a competent wrap-up of what was accomplished and what that means.

Credit is given for depth, coherence, accuracy and logic demonstrated in taking a position regarding some theoretical aspect of the work of that unit and supporting the position with logical arguments and evidence, pro and con, from the readings. Grades: √, √– or √+.

Lab Report/Empirical Paper

A less common, but useful assignment, usually used in methods courses or in sections of larger lecture courses, is the lab report. These typically are requested after students have participated or observed a research study in class or as part of the study pool. Students are asked to write up a paper including a brief introduction, method, results and discussion. The length will vary greatly depending on your goals and where the students are in their training. In some ways these are easier to grade for most of us because they are closer to the most common type of writing that academic psychologists do—an empirical paper. Grading usually focuses on clarity (especially in the methods and results sections), ability to do technical, rather than creative, writing, and writers' use of APA formatting. The typical goal in assigning a lab report is to provide students an opportunity to write like we do, to participate in real research, and to be able to report on that research experience. It also allows an instructor to be sure that students understood the research.

Research Proposal

One type of larger essay that instructors often assign as an end-of-semester assignment is a research proposal. Here students write something like an empirical paper with a twist. Students are typically asked to write an introduction including reviewing the relevant literature, a proposed methods section, a section on predicted results, and finally a general discussion in which students describe the implications of these predicted results on the literature. Such an assignment is useful if you want your students to be thinking like an academic psychologist—in terms of what makes a good study, what questions still need to be answered, how would one manipulate the variable of interest, etc.

Literature Review and Synthesis

Another type of end-of–semester assignment is the literature review and synthesis paper. Some sophomore essays will be written in this style. The basic idea is that students will become an "expert" in one or more sub-areas (e.g., the effect of emotion on decision-

making) and then will either synthesize the literature by putting a new spin on it or will integrate two or more of these areas in a unique way. For a high grade the paper should involve an "original contribution" or an idea that students came up with themselves based on their reading of the literature. One way in which students are often able to do this is by drawing a connection between two previous disparate areas of research. One of the benefits of this type of assignment is that it allows students to study an area of interest to them in a deep way and to really become an expert in that topic. In seminar–type courses, instructors often pair this type of assignment with a presentation in which students can present their ideas to the other students and answer questions on the topic, thereby allowing them the opportunity to be an expert to their peers. The length of the lit review/synthesis paper will vary depending upon the type of course. Upper level seminar papers may range in length from 15 to 30 pages. Lecture course papers tend to be shorter and require a less in–depth covering of the material. They may range from 10 to 15 pages in length.

Sample Term Paper Assignment for a Lecture Course (from Shelley Carson)
This paper is basically a review–of–the–literature format.

1) The paper will be 10-12 pages (double-spaced, 1″ margins, 12 pt. standard font). (Note that the paper will also include a title page and a Reference section which are not included in the page count.) Please number all pages.

2) Use APA format for in-text citations, reference section, and headings/subheadings. You do NOT need to include an abstract. (Note: APA guidelines available on our website)

3) **Topic**: you may write upon virtually any topic that involves abnormal psychology. You may want to pick a topic that you would like to know more about but that is not covered in the course readings, or you may write in depth about a topic we have touched upon in the course. Pick a topic that you're excited about.

4) The paper should include a thorough and well-written literature review.

5) Your literature review should focus primarily on peer-review journal articles related to your topic. You may also use scholarly books as references. You should thoroughly search the PsycINFO database for relevant sources. Keep pop psych and newspaper/magazine references to a minimum (only use for examples).

6) How many references? Ten to 12 references (one per page of writing) is generally considered the minimum. However, your reference section will reflect the thoroughness of your reading in your chosen topic area, so the best papers will likely have a larger number of references. Only references that are actually cited in your paper should be included.

7) After you have read the articles and books or book chapters pertinent to your topic, devise a thesis. Your thesis should be specific rather than broad.

>   **Bad (too broad):** The Treatment of Alcoholism
>
>   Personality and Eating Disorders
>
>   **Good (specific):**   Is Antabuse an Effective Treatment for Alcoholism?
>
>   The Relationship of Perfectionism and Anorexia Nervosa

8) Your thesis should appear early in the paper.

9) The bulk of your paper should present evidence relevant to your thesis.

10) One effective technique is to present two opposing points of view on your thesis topic, and demonstrate that the preponderance of evidence supports a particular point of view.

11) Your paper should have an introduction (including a thesis and reasons why your thesis is important), a body presenting detailed and specific evidence to back the thesis, a conclusions section, and a reference section.

12) DO NOT PLAGIARIZE. Be very careful to cite conclusions, theories and ideas (as well as data) that you've acquired from other authors.

13) For further tips on writing a good term paper, consult the *Do's and Don'ts of Effective Writing in Psychology* available on the course website.

14) The paper should be emailed to me as an attachment in MSWord no later than midnight on (date).

Tips for Writing Clear Assignments

Now that you have some sense of the types of writing assignments, you'll need to think about how to tell your students about those assignments. Clear writing starts with a clear writing assignment. Students should understand what to do and what not to do from reading the assignment or from your description or it in class. Here are a few tips to help create clear, useful assignments:

(1) Describe the assignment with as little jargon as possible. Students may not know what it means to "review empirical papers" so you either need to define your terms or you need to avoid the jargon altogether.

(2) Describe not only what students are to do, but why. Explaining why they are doing an assignment (e.g., "this assignment is designed to help you learn to use PsycInfo.") helps students to see that you are not simply giving busy work, but that you are helping them develop a skill.

(3) Clearly specify when, where and in what format the assignment is due. For example, rather than saying "assignments are due Tuesday" specify "this essay must be submitted to the dropbox on the course website by Tuesday at noon"

(4) Clearly specify formatting requirements, including page length, margins, font, double-spacing. Telling students to use APA format is not always enough. For example, some instructors mean this to include a title page and/or abstract, while others mean that students should simply format their references in APA style. Be sure to tell students what you expect if you care about these features.

(5) Explain what factors will contribute to grades on this assignment. Are you grading based on the level of unique contribution, based on the number of citations used, use of APA style, or quality of the argument? Students here and elsewhere care a great deal about how they will be graded and the more information you can provide up front, the less explaining you will have to do when you return the assignment. Some instructors find it useful to write a grading rubric and to provide it to students in advance of an essay's due date so that students have information about what factors contribute to grading (see section on Grading for more information on rubrics).

(6) Make sure you can imagine what an A paper will look like. Before assigning a particular assignment, think through what a perfect paper might look like. Then, once you know what this perfect paper would look like, make sure that's what you've described. Doing so will help you to ensure

that students have the information necessary to write a good paper.*

(7)   Explain how this assignment is related to, yet distinct from previous assignments in the course. If you are assigning similar essays, for example, it is helpful to know if the second one should be done in a similar way to the first or whether instead the first focused on readings from class and the use of APA format and the second one takes those skills as a given and adds the dimension of finding your own resources and coming up with a unique contribution.*

(8)   Finally, you may want to inform students up front about whether you are willing to look at a draft of their paper. If you are willing to do so, specify by what date and in what form you expect them to submit the draft (see Writing Feedback for more information). Also let students know whether or not the draft will be graded.

*adapted from *Teaching Expos: A Guide for New Preceptors*, Gordon Harvey, 9/5/96

In-class Writing Instruction

You can use time in class or section to cover writing issues that apply to all of your students instead of meeting with each of them individually. In–class writing instruction can be used to tell students explicitly what you expect from a particular writing assignment as well as to go over common student writing mistakes. You may, for example, go over the Do's and Don'ts of Effective Writing in Psychology during class time (see Appendix C). By covering the basics up front, you can save students from making mistakes in the first place, and save yourself from writing the same comments and corrections over and over.

If you teach a course that is writing–intensive, you may also want to try one of these techniques:

• Use an informal, low-stakes writing assignment to launch a discussion about writing. For instance, you might give students a writing exercise and then discuss it as a group without grading it.

• Create a short sample paper that incorporates many common mistakes and ask the students to find them and discuss how to improve the writing.

• Conduct a class discussion on writing before a big writing assignment or before the first writing assignment for your class. In such as session you might want to encourage students to explicitly think about and discuss higher level questions such as what the point of the assignment is, what the writer should be trying to convey, what the reader will be trying to get out of the assignment, or why this particular assignment might be important. This type of discussion gives students an opportunity to get into your mind, to put some time into thinking about the assignment before diving into the details, and it encourages them to think about writing from the perspective of a prospective reader. Such a discussion gives you an opportunity to correct any misconceptions before the actual writing assignment is begun.

Plagiarism

Plagiarism is a growing issue on campuses across the country. The availability of internet sources of plagiarism can be a major temptation to students, especially during stressful end–of–semester periods when multiple assignments are due. This is a serious issue that needs to be addressed in class, ideally near the beginning of the semester. A frank in–class discussion will educate students about what constitutes plagiarism and emphasize to

students that both you and the university take issues of plagiarism very seriously.

A wide range of actions fall under the category of plagiarism and these actions can occur for many reasons. All of the following cases would be considered plagiarism to varying degrees:

- a student who intentionally copies work from someone else knowing full-well that this is against the rules

- a student who copies an idea but fails to cite the source of the idea because he/she does not understand how to cite sources

- a student that does not realize that he/she cannot write the same paper that his/her best friend wrote about at another university

- a student who turns in the same assignment for two classes, and

- a student who unintentionally copies an idea based on something he/she just read.

Whether a student meant to plagiarize or not, ignorance of academic honesty rules does not determine whether plagiarism occurred. Therefore, it is helpful to inform students about plagiarism to at least avoid situations in which students might unintentionally plagiarize.

We recommend trying to head off plagiarism before it becomes an issue by both mentioning your plagiarism policies in the syllabus and explicitly discussing them during your class.

In your syllabus. Plagiarism policy should be stated explicitly in the syllabus. Below is an example of how to address plagiarism in your syllabus (feel free to use this example without citation):

Academic Honesty:

Attempting to receive credit for written work that is not one's own will be submitted to the Administrative Board for review (see *Harvard College Handbook for Students* for policy on Academic Dishonesty). If the Ad Board determines that academic dishonesty occured, disciplinary action will be taken by the College and may include expulsion from the course and the school. It is each student's responsibility to learn the rules governing the proper use of sources. If you have questions concerning the appropriate use of sources, please refer to *Writing with Sources*, prepared by Harvard's Expository Writing Program (available online at http://www.fas.harvard.edu/~expos/sources by clicking on Writing Resources on the left and then choosing *Writing with Sources*). I have also provided guidelines for citing sources in the field of psychology on the course website. Please review these guidelines and feel free to contact the teaching staff if you have questions concerning the citation of material.

It is also important to point out to students that assignments for other classes cannot be used in whole or part for your class without receiving permission from the instructor(s) of both classes, as some students claim not to know this rule (although they should have learned about it during their freshman year).

In your class. It's important to discuss the plagiarism policy in class. It takes only a few minutes to say something, but doing so reinforces the importance of citing sources and indicates that you take plagiarism seriously. The Psychology Department alone deals with several plagiarism cases each year.

Information about Harvard's plagiarism policy is available in the undergraduate handbook or online at: http://webdocs.registrar.fas.harvard.edu/ugrad_handbook/current/chapter2/academic_dishonesty.html . If you do suspect plagiarism, the best step is to consult with the Head Tutor or the Undergraduate Office who will direct you on how to report the occurrence. All incidents of suspected plagiarism must be reported and you are not responsible for determining the consequence, rather the Administrative Board will do so.

It may be tempting to turn a blind eye to issues of plagiarism because checking for violations entails unpleasant confrontations with students, as well as an extra administrative burden. However, we are not doing our students a favor by ignoring violations.

All instructors should be familiar with the U.S. Department of Health and Human Resources Office of Research Integrity website: http://ori.hhs.gov/education/products/plagiarism/. This website provides a detailed discussion of different types of plagiarism.

Once Students Have Written: Providing Feedback for Students

Now that students have completed their writing assignments, and you have their papers in hand, you may be asking the following questions:

- What do I say to my students about their writing?

- How can my feedback be most effective?

- How do I decide on a grade?

- Is it useful for students to give feedback to each other?

In the following sections we discuss some tips for what to do once students have turned in their writing assignments. Here we discuss some effective strategies for providing feedback to students, how to incorporate peer feedback, the use of individual meetings with students, and some suggestions for grading student writing.

Writing Feedback

Nothing can help a student improve his or her writing as much as your comments on individual pieces of work. Making suggestions and giving feedback about what worked well (and what didn't work so well) can make a big difference in your students' writing ability. Too many, or too harsh, comments can overwhelm or discourage a student, while vague or overly positive comments are not always constructive or helpful.

Since your goal in responding to papers is primarily to help students write more convincing papers for a demanding academic audience—and at some level to justify your grades—try to craft your comments so that they'll be constructive and compelling. And since you have many demands on your time, you also want to be able to respond to your students' writing as efficiently as you can. Below are some tips and accompanying explanations, adapted from two sources: the Fall 2000 draft of Kerry Walk's Expository Writing Program booklet *Commenting and Grading: A Guide for Preceptors* and Linda Simon's (1996) *The Teaching Fellow's Guide to Student Writing*.

Guideline 1: Impart Your Expectations Clearly

A. Write clear assignments
Remember first that if you design your assignments carefully (see the earlier section on Writing Clear Assignments), you'll prevent entire batches of disastrous drafts from tormenting you when it's time to comment and grade. More importantly, you'll save your students from more than their usual frustration and confusion. "You get what you ask for." Assignments should be quite specific (see Types of Writing Assignments).

B. Be specific about your expectations for revisions

Set out a revision policy early in the course (perhaps in the syllabus). Let students know whether you will be willing to look at a draft of their paper and make comments on it. If so, state both the date by which you must receive the draft and also how polished a draft you expect. (A rough draft will have proofreading errors and may contain sections that are still in the outline stage, while a completed draft will be similar to a final draft.)

Example:

I am happy to look at a completed draft of your paper if you submit it by (date). I will make comments and return them to you by (date). However, simply addressing each of my comments in your revision does not guarantee an A paper!

C. Be specific about your grading criteria

Before you begin to grade, establish clear criteria for assessing the students' writing. Your criteria might include thesis, structure, evidence and analysis, and style. It's a good idea to write down these criteria and give them to the students.

Example: "Your paper will be graded on the following elements:

- A clear and well-formed thesis

- Organization that is logical and clear

- Evidence that reflects adequate review of the literature

- Evidence that effectively supports the thesis

- Appropriate use of APA style guidelines

This makes it crystal clear what you expect. You should indicate your general grading criteria on your syllabus (as well as how much of the grade is for the drafts, the final essay, response papers, etc.), and once you've distributed this information you should not later change these criteria. The students, with justification, view this as a contract.

Guideline 2: Consider Requesting Electronic Papers for Editing

If you request assignments be submitted electronically in MS Word document form, you can make in-text comments/suggestions and add an additional page at the end of the document for end comments and a grade. The e-document allows you to cut and paste examples from the paper into your comments to add examples and clarity to your suggestions. You can also remove or modify comments that you reconsider as you work through the document. Electronically-submitted documents are also easier for students to revise and they save paper. They are less likely to get misplaced, and they provide a record to which you can refer when you edit future documents from the same student, write letters of recommendation, etc.

Guideline 3: Skim Over Papers Before You Begin to Write Your Comments

Skim through the pile of papers to discern the range of responses to an assignment (rather than jumping into grading one paper before looking at the rest of the pile). Then skim over each paper before you begin to write margin comments. Note the organization of the paper, the use of headings and subheadings, and any patterns that are

evident from a cursory reading. Glance at the Reference list to get an idea of the depth of the research and the types of sources the student used for the paper. Then, when you begin to read the paper thoroughly, you will have an idea of where the paper is going and what potential overlying problems you may encounter. This will help you focus your comments.

Guideline 4: Use Marginal Comments to Indicate Patterns in the Writing

- **Focus your marginal comments**. In the margins of a student paper, comment primarily on patterns—representative strengths and weaknesses. (Avoid covering the paper with red ink by marking up or copy-editing every mechanical error and instance of syntactic awkwardness. If you concentrate on marking up every sentence for errors, including grammar and spelling, and awkwardness, students will feel overwhelmed or intimidated. They could also receive the impression that by merely fixing the sentence-level mistakes they can substantially revise a paper.)

- **Copy-editing is particularly counterproductive**. Copy-editing also requires considerable time, and often when a writer clarifies his or her ideas and gains writing practice, these mistakes go away automatically. If you do notice that a student has persistent mistakes with grammar, you might think about referring him or her to the Writing Center or tutor, or a stylebook such as the *Chicago Manual of Style* or Joseph Williams' *Style: Ten Essays on Clarity and Grace*. If you would like to correct their grammar mistakes yourself, mark up one or two sample paragraphs instead of the whole document. Showing the student one sample instance of where they could improve and how to improve is a more efficient, and less overwhelming, way to correct grammar mistakes.

- **Marginal comments should serve as a bridge between the paper and your end comments.** When the student reads the end comments, they can refer back to the marginal comments for specific examples. "**Do's and Don'ts**" for writing in psychology (taken from our companion student writing guide) appear in Appendix C. You might want to use that list for marginal comments that students will understand, and refer them to the guide for an explanation. For example, you might write in the margin, "passive voice - see number four under General Scholarly Writing 'Do's and Don'ts.'" The list can provide you and your students with a common starting language.

Guideline 5: Prioritize and Organize Your End Comments

Before you tackle the stack of papers before you, list, in order of importance, the qualities you are looking for in the paper. Below is an example of a priority list. Your priorities may change from assignment to assignment.

Example:

1) a clear thesis statement presented early in the paper

2) evidence that the student conducted an appropriate and thorough lit search

3) logical organization of the material

4) a good justification for the importance of the research question addressed

5) concrete evidence and examples supporting the thesis statement

6) good paragraph construction

7) appropriate conclusions drawn from the stated evidence

8) appropriate "tone" (not too colloquial or editorial)

9) mastery of APA style guidelines for in-text citations and references

10) clear and grammatically-correct sentences

11) lack of proofreading errors

Limit your discussion of each paper's weaknesses to 3 or 4 points in order of the priorities you have established in your list. If a student is having difficulty expressing a clear thesis, he or she will not get the most benefit from your suggestions if you get hung up on lower-order problems such as grammar or proofreading. Often, once higher-order writing problems are addressed and the student gains confidence in writing, the lower-order problems fix themselves.

Guideline 6: Write Comments with the Future in Mind

The Writing Center (1996) suggests the following sequence for comments at the end of the paper:

1) Salutation (address the student by name: e.g. "Dear ____")

2) Mirror the paper's main point (you may quote directly from the paper)

3) Discuss the paper's strengths, comparing to previous papers if possible. It is possible to find something good to say about even the most poorly-written papers, such as:

   a. "You have touched on some very interesting themes in this paper (name them). "You have chosen a very interesting topic that has broad implications…"

   b. "You have made great strides in organization since your paper earlier this semester"

4) Discuss the paper's weaknesses

   a. Prioritize these comments, give examples, and be specific.

   b. Limit the number of suggestions for weaknesses to three or four.

   c. Focus on the most important problems.

   d. A simple statement such as: "Here are my suggestions for how to improve future papers" will help encourage students rather than discourage them as they read your comments on the paper's weaknesses.

   e. Strive to make comments specific (substantiate your claims about the paper with specific references to passages, sentences, and paragraphs in the paper).

5) Concluding remark(s) and signature. Try to end on an encouraging note.

Guideline 7: Avoid Vagueness in Your Comments

The inverse of commenting too much is commenting too little or so vaguely that students can't possibly figure out what they need to improve in their work. The Writing Center (1996) lists the most common confusing margin comments:

• *Unclear*. Do you mean you don't understand the point the student is making in this section? Do

you mean that the choice of a specific word or phrase is imprecise? Make sure you have indicated clearly what is unclear and perhaps suggest a way to improve clarity.

- *Awkward*. Students need help understanding what makes a passage or sentence awkward. Dangling phrases? Odd sentence structure? Inflated or repetitive language?

- *Unfocused*. Do you mean there is no clear statement of the argument? Too broad a topic? Structure is illogical? Make sure to identify the main cause of the problem and make a specific suggestion for improvement.

- *?.* What is it you don't understand? Be specific rather than making the student guess what puzzled you. Was it lack of concrete details? Not enough information?

  End comments can also be vague. For example: "You've done some good work here but you need more evidence" only describes the problems—and minimally so (the student thinks, "Where did I need more evidence? OK, next time I'll just dump in more quotations."). Use the end comment to model a little for students the kind of writing and thinking you're asking them to do: substantiate your claims about their paper's strengths and weaknesses with examples (refer to pages or paragraphs in the student's paper or quote key sentences of theirs).

Additional Tips for Commenting on Papers

- Ask questions in comments to engage students in conversation and to avoid tedious prescriptions. ("What might account for X?")

- Invoke "the reader" in your comments to impress upon students that their papers should move from being interior monologues to arguments for an audience. Try pointing to the presence of readers in more of your comments. ("Your readers need more evidence for this claim" or "How might your readers object to this claim given X?")

- Resist the urge to write caustic or impersonal comments even though some of your students' work and attitudes in class might try your patience. The tone you adopt in your comments can make the difference between keeping your students listening to you and pushing them away.

Summary of Strategies for Feedback on Writing Assignments

- Skim through the pile of papers to discern the range of responses to an assignment (rather than jumping into grading one paper before looking at the rest of the pile).

- Read each essay through quickly, before making any comments, to identify major strengths and weaknesses.

- Determine those strengths and weaknesses according to clear assessment criteria—thesis, organization, evidence, APA style, etc.

- Focus marginal comments on patterns, rather than catching and commenting on everything.

- Use a reliable format for structuring final comments—for example, salutation, restatement of thesis, discussion of strengths, and discussion of weaknesses.

- Identify in end comments no more than three or four areas for improvement.

As you can see from the following figure, students find feedback to be one of the most important parts of writing instruction.

Advice for Faculty:
If you could offer advice about writing instruction, how important would the following pieces of advice be?

100

Give more detailed feedback on papers **87%**

Offer feedback on drafts **80%**

Offer feedback on proposals or tentative theses **77%**

Design clearer writing assignments **69%**

Hand out guidelines and strategies **59%**

Assign more writing **13%**

Percentage Indicating Important or Very Important 0

from Harvard Writing Project Bulletin

Peer Writing Feedback/Workshops

As scientists, we understand the importance of peer review: We review manuscripts for journals. We constructively critique lab members' ideas. We cite articles from vigorously peer-reviewed journals, and we seek to publish our findings in high impact, peer-reviewed journals. However, the importance of peer review, which is highly salient to us as researchers, often is not intuitively obvious to our undergraduate students.

It is important to introduce students to the construct of peer review, and to explain its importance. One way in which we can introduce students to peer review is through library training sessions that emphasize the importance of distinguishing credible (peer-reviewed) from not credible sources. We can also explain peer review's significance by incorporating the construct of peer review into a broader discussion contrasting science with pseudo-science. These are two among many possible strategies for introducing peer review.

Why include peer review in our class assignments?

Peer review benefits student writers. As students grasp the important role peer review enacts in scientific inquiry, we can further enrich their understanding by incorporating peer review into their class experience. As you may recall from your own learning experiences, be it high school physics laboratory experiments, ballroom dancing lessons, or graduate education in neuropsychological assessment, combining theory with practice results in a richer and more lasting learning experience. Another consideration is that if we tell our students that peer review is an important part of good science, and we also tell them that their papers and research projects are important, then logically their scientific work merits review by their peers. Thus, by incorporating peer review into the students' experience, we can encourage students to engage with the writing process.

Constructive peer review activity can greatly enrich the student experience. Students can see their own and classmates' work improve as a result of peer review. In addition, learning how to peer review constructively is a worthwhile skill. Not only is it an invaluable skill should students choose to pursue a career in the sciences, it also is useful in other fields, including the business world. Learning to incorporate feedback from multiple readers into one's work is also an essential skill. In addition, peer review is useful because in reviewing others' writing, students often become more aware of their own writing.

What are the barriers to student peer review?

Student peer review assignments may seem unwieldy and perilous to incorporate. Significant barriers to student peer review assignments include worry that students may be destructive rather than constructive in their criticisms, worry that even if peer review is appropriate, then shy students may be very uncomfortable, and concern that implementing student peer review may devour what little free time one has available, in class, perhaps intruding on time needed for other obligations.

The best way to address destructive feedback to students is to prevent it from occurring. It is important to dedicate class time to differentiating constructive from destructive criticism. You might have a classroom discussion, allowing students to participate in generating examples. Then you can assign a sample draft to be reviewed. By assigning students to complete a sample review after the classroom discussion, you can ascertain that students understand what is and is not useful feedback.

Another way to reduce the likelihood of destructive criticism is to require students to sign their reviews. It also is helpful to frame the assignment as if the students were all fellow members of a lab. It also may be useful, if the peer review occurs relatively early in the writing process, to ask student reviewers to identify two or three empirical (or in some cases review) articles that may be useful for the writer's literature review. This can

help writers improve their drafts and aid reviewers in developing their library skills.

Concerns over the reaction of shy students are understandable. Certainly you want to provide a good learning environment for all your students. However, it also is important to prepare students to succeed, even if that means requiring students to stretch a bit outside of what is familiar and comfortable. Participating in peer review can be a valuable experience for such students.

Time management is a challenge and a legitimate concern, especially for over-committed graduate students, post docs, and junior faculty. However, it is possible to incorporate peer review without it becoming burdensome. By dedicating some in-class time to a discussion of peer review, and assigning a sample draft to be reviewed, it is possible for peer review to ultimately save time. By having students review a draft after the first round of revisions, but before the second draft is due to the instructor, and by requiring students to address problems noted by their reviewers, the quality of draft can significantly improve, reducing instructor time spent editing individual drafts.

Peer Review Forms

One approach to implementing peer review is to ask that each student review three to five pages of writing from two peers. Having two students review the same paper increases reviewer accountability. This way, student writers will receive feedback from two readers.

Using a peer review form helps students explicitly understand what is wanted and expected in a review. Three different peer review forms are located in Appendix D. They may be used as-is or modified as you wish. You may also choose to create your own peer review form from the following list of questions and prompts.

- What do you think is the writer's main point?

- What is the writer's thesis statement?

- What is the general topic area of the paper?

- What are two or three strengths of this paper?

- What two or three things would you like to see improved or strengthened in the next draft?

- Was there anything in this paper was confusing to you?

- What questions are unresolved?

- Reread the paper, making any comments in the margins you feel would be helpful. Try to comment on development and organization of ideas: Do you understand the points the writer is trying to make?

- Is there any place where the writer needs to support an idea with more concrete detail or explanation? If so, where?

- How well does the writer make transitions between his/her main points? Identify places that need better transitions.

- What would you like to know more about? What questions do you still have?

Individual Meetings with Students

Conferences with students can be wonderful teaching opportunities. Student con-

ferences can help establish good rapport, provide an opportunity to get to know your students better, and allow you to individualize your teaching. Your conferences may consist of anything from a brainstorming session, to a review of a draft, to a writing skills coaching session.

Setting the Stage for Successful Conferences

Students are far more receptive and responsive to constructive criticism when it is from someone with whom they have a positive relationship. One way to help establish rapport is to make students feel welcome in your office. Small gestures, such as greeting the student by name, having a stocked candy bowl within easy reach of the student, and making regular eye contact can help establish good rapport.

Another way to promote successful conferences is to encourage students to prepare for meetings. For example, if a student asks for help in selecting a paper topic, ask her or him to bring a list of three or more potential topics or areas of interest. Another tactic is to ask students to bring relevant article abstracts with them to the conference, at least one abstract per potential topic area.

Successful Conferences

One successful technique for conferring about a paper in progress is to ask students to bring specific questions regarding their work. In that way, the students can ask for clarification of comments or examples.

In a less formal brainstorming session, you can try engaging students by asking questions about what interests them and listening for patterns in what they say. Be sure to help them narrow down their ideas. In a half-hour meeting you can help a student go from "I think I'm interested in development and in biology," to a specific thesis from which to work. If it is an area you know well, you can send students off with a few key references or researchers' names, and if not, you can suggest key words to use in an initial reference search. (See Appendix E: How to Help Students Choose a Thesis for more ideas about helping students select a topic.)

Whether or not they express it to you, student writers can be very vulnerable. They are learning a new skill, scientific writing, and opening themselves to criticism can be painful. By establishing good rapport, you are already at an advantage. Students can become very invested in their written work, and at times it can be very difficult for them to hear criticism without feeling defensive. Students are more likely to be able to incorporate new ways of doing things if criticism is constructive, not destructive.

A productive way to approach conferences is to engage students in a collaborative process. Instead of saying "do it this way," it may be more useful to suggest, saying something along the lines of, "do you think it sounds better if…?" If a student is having trouble seeing the problems in her or his paper, the student may have an easier time *hearing* the problems: Try having your student read a problematic phrase or short section aloud, then work together on improving it. This is a good way to model reading drafts aloud. Reading aloud, especially to a listener, can help identify problems in clarity, organization, and flow, as well as in grammar. Reading their papers aloud is a useful habit for students to develop. If a student is very invested in a particular phrase or humorous aside, you may even suggest she or he save two versions of a paper—the version for her or himself, and the formal amended version for submission. (Remember

that the goal is to facilitate learning, not to get involved in a power struggle. In a power struggle, you will win, but that means the student loses.)

Communication!

Remember that a conference is an opportunity for you and your student to collaborate, to work together to help the student learn and grow. Sometimes students are afraid that they'll seem incompetent or inadequate if they ask the wrong question or say the wrong thing. Some students have learned to immediately agree with authority figures, regardless of whether or not they understand what is being asked or said. Sometimes this sort of communication breakdown can reflect cultural differences. While it is the student's responsibility to ask for clarifications, many problems can be averted by checking in with the student and making sure that meaningful communication is occurring.

In the business world, an important part of meetings is setting goals for future performance. You may find it helpful to set deadlines and expectations for future performance. For example, "Before our next meeting, I would like you to have written and read aloud the next three pages of your draft." Specific and manageable goals or assignments can help guide and motivate students.

Ending Meetings

Rome was not built in a day, and writing skills are not perfected in twenty or thirty minutes. Accomplishing something, but not everything, is the norm for a conference. When the time you allotted is finished, it is okay to let the student know that you cannot meet any longer. Some instructors do this by scheduling appointments back-to-back, or before class meeting time, so there is a natural meeting endpoint. However, it also is reasonable to end a meeting by saying something such as, "I have to prepare for another meeting now," or, "I need to prepare for my lecture now." One especially nice way to wrap up a meeting is a few minutes before you plan to end, ask the student, "Before we wrap up, do you have any last concerns or questions?" This cues the student that the time is short and allows her or him to prioritize any remaining concerns.

Help and Tissues

Sometimes when meeting one-on-one, a student may share that she or he is having a serious problem that is not related to your course. It is appropriate to listen; it is appropriate to care; it is appropriate to have tissues on hand. It also is appropriate to refer students to other resources and to immediately let the Psychology Undergraduate Office know that your student is having difficulties. In some cases, you also may need to talk with student's Resident Dean. The idea is to add to the student's resources and improve her or his access to help. This does not mean that you cannot be an important source of support for a student who is experiencing difficulties; it does mean that you cannot and should not be the sole source of university support for a troubled student.

A Final Word on Conferences with Students

Finally, keep in mind that conferences can be fun – both for you and the student. It can be very gratifying to see students grow and their writing improve.

Grading

You may find that some assignments are best graded with only a pass-fail or "check-plus, check, zero" system, especially on more minor assignments such as weekly response papers. Even so, you will be expected to eventually give an overall grade for students' performance in your class and therefore it will be helpful to you and your student to have assignments throughout the semester in which students get grades in order for them to monitor their progress. Unfortunately, as is the case at most colleges and universities, students at Harvard may obsess over grades. One way to minimize the number of questions asked about your grading policy is to be up-front about it and to provide that information in your syllabus (see <u>Writing Feedback</u> for an example). It is helpful for students to understand how their grades will be computed (e.g., what percentage is based on participation vs. the final exam vs. response papers) as well as whether the class is curved at the end of the semester, after each test or paper, or not at all.

One approach to grading particular assignments is to come up with a rubric allocating points for different components of the assignment (e.g., 10 points related to organization, 20 points for mechanics, etc…for a total of 100 points on the assignment). One benefit of this grading scheme is that it allows the grader to follow more specific guidelines in computing an overall grade, rather than relying on one's gut for a score. Some instructors find that they are more reliable graders when they have more concrete categories making up the final grade. Some instructors give students the rubric before grading the paper while others give the rubric to the students along with their comments after the paper and still others choose to use the rubric for their own grading purposes and to help write comments but do not return the actual component scores to the students. If you adopt this method you may want to try multiple approaches and see which one works best for you. Below are two examples of grading rubrics:

1. Numerical Grading Rubric (from Shelley Carson)

(Note that the weight of each element can be changed according to the intent of the writing assignment and the course content)

Research	(20 total points)
– suitably focused and narrow topic	5
– evidence of thorough lit search	10
– use of peer-reviewed sources	5
Content	(30 total points)
– clear statement of thesis	10
– evidence supporting thesis	10
– clear and convincing conclusion	5
– overall originality of idea	5
Organization	(25 total points)
– clear progression of ideas	15
– good use of headings and subheadings	10
Mechanics	(25 total points)
– use of APA style (in-text citations and reference section)	10
– clarity and readability	5
– appropriate scholarly tone	5
– spelling, grammar, sentence structure	5

2. Conceptual Grading Rubric (from Kate Clancy)

A paper in the **A range:**

- THESIS is interesting, arguable, incisive; sufficiently limited in scope; usually stated early on and present throughout

- STRUCTURE is logical, progressive (not just a list), supple (invites complications, consideration of counter-arguments), with strong and obvious links between points; coherent, well-organized paragraphs

- EVIDENCE is sufficient, appropriate, and well-chosen; presented in a readable and understandable way; summarized or paraphrased as necessary

- ANALYSIS is insightful and fresh; more than summary or paraphrase; shows how evidence supports thesis

- SOURCES are well-chosen [this is relevant for third paper only]; deployed in a range of ways; quoted and cited correctly

- STYLE is clear and conversational yet sophisticated; diction level appropriate to audience; smooth, stimulating, a pleasure to read

A paper in the **B range** may resemble an A paper, but may also exhibit any of the following:

- THESIS is arguable but may be vague or uninteresting, or feature unintegrated parts; may be only implied, not stated early on; may not be argued throughout, disappears in places

- STRUCTURE generally logical but either confusing in places (big jumps, missing links) or overly predictable and undeveloped; few complications or considerations of counter-arguments; some disorganized paragraphs (bloated, skimpy, or confusing)

- EVIDENCE is generally solid but may be scanty or presented as undigested quotations

- ANALYSIS at times insightful but sometimes missing or mere summary; makes inconsistent connections between evidence and thesis

- SOURCES quoted and cited correctly (for the most part) but deployed in limited ways, often as a straw person or simply an affirmation of writer's viewpoint

- STYLE is generally clear but lacking in sophistication; may be weighed down by fancy diction meant to impress; may exhibit some errors in punctuation, grammar, spelling and format

A **C range** paper may in part resemble a B range paper, but may also exhibit any of the following qualities:

- THESIS is vague, descriptive or confusing; parts are unintegrated (e.g., three unrelated prongs); only implied or not stated early on; not argued throughout, disappears in places

- STRUCTURE is confusing (big jumps, missing links) or overly predictable ("five paragraph theme"); few complications or considerations of counter-arguments; disorganized paragraphs (usually skimpy), often headed with descriptive (versus argumentative) topic sentences

- EVIDENCE is either missing or presented as undigested quotations; may be taken out of context

- ANALYSIS has some insightful moments but generally is either missing or mere summary; may present some misreadings

- SOURCES are plopped in (if used at all); may be quoted and cited incorrectly, used merely as filler

or affirmation of writer's viewpoint

• STYLE may be generally unclear and hard to read, or simplistic; may evince many technical errors

Some instructors give students an opportunity to edit or fix work after an initial deadline and to make back some or all of the missed points by doing so. For example, if a student has done uncharacteristically badly on a paper the instructor may decide to give the student an extra week with an opportunity to make back up to half of the points missed. Other instructors explicitly assign multiple drafts of papers in order for students to practice both writing and editing, either grading or not grading the drafts along the way. You may choose to grade the drafts in some way in order to further encourage students to turn in high quality drafts, rather than assuming they can turn in low-quality drafts and just receive instructor feedback to make the final draft better (see Writing Feedback for more information on accepting drafts).

Trouble-Shooting

Of course teaching is complicated and issues are certain to arise that cannot be anticipated and are not addressed in this guide. There are many resources available in these cases. Below is a list of resources that are available for teachers seeking advice:

• **The faculty handbook** – The handbook entitled Information for Faculty Offering Instruction in Arts and Sciences (found at http://webdocs.registrar.fas.harvard.edu/faculty_handbook/current/index.html) has all of the official policies and deadlines related to teaching, and should be your first stop for answers to your questions.

• **The Psychology Undergraduate Office** – The staff in the Undergraduate Office are available to meet with and talk to faculty, tutors and TFs as needed. They are the best source of advice on departmental policies that relate to undergraduate affairs. You might seek the Undergraduate Office's help if you want to know information such as when the add/drop deadline is or what the departmental policy about capping class size is.

• **The Head Tutor** – The head tutor is a faculty member that is available to faculty, tutors and TFs to consult about any teaching related matter. You might seek the Head Tutor's advice if, for example, you are trying to decide what to do with a problem student or if you suspect plagiarism by one of your students.

• **The House Resident Deans** – Each undergraduate lives in and/or is associated with a house. Each house has a Resident Dean that is a faculty/staff member who deals with academic and personal matters involving students. If you are having issues with a particular student, the Resident Dean may be a useful resource. You might speak to the Resident Dean if, for example, a student has told you that he or she has major personal events influencing his/her work and you feel that another source closer to the student should be aware of those events.

• **The Bok Center** – The Bok Center for Teaching and Learning is available to consult about any teaching relating matters. The Bok Center is a good resource if you are looking to generally improve your teaching skills. The Bok Center has experts with a range of specialties, and you can request to meet with someone with expertise in, for example, psychology, statistics, or biology. The Bok Center runs Fall and Winter Teaching conferences; it also provides useful tips for teaching (e.g., how to lead a discussion, public speaking, etc) and video-viewing sessions in which you can have your class or section video-taped and then review that tape with a consultant to discuss teaching strategies and styles.

How to Teach Students to Read and Understand Primary Sources

Step One: The Importance of Sources

In psychology, sources of information are arranged in a hierarchical fashion, with some sources carrying more weight than others. The first step in teaching students to read and understand information in the field is to familiarize them with the hierarchy of available sources and to make clear why some sources are more credible than others. The difference between primary and secondary sources should also be explained. In order of importance the list is roughly as follows:

- Articles from peer-reviewed journals

  - information is collected through scientific method and is reviewed by experts in the specific topic area before being accepted for publication

  - note also that there is a hierarchy of prestige of journals within each topic area or psychology. The most prestigious journals have the strictest guidelines for publication

  - students can determine which peer-reviewed journals have the most impact in their fields by noting their Impact Factor (see Appendix B)

- Scholarly books

  - generally written by experts in the field.

  - they are reviewed by editors who may or may not have expertise in the particular topic area

- Textbooks

  - written by experts in the field of psychology

  - reviewed by psychologists and editors

  - textbooks are secondary sources (they are reporting second-hand on the research done by others)

  - may provide a good overview of a topic area, but generally should not be cited in papers (instead, read and cite the original research)

- Books geared toward the general population

  - generally written by experts in the field

  - reviewed by editors with an eye toward sales to wide audience

  - will not contain specifics on methodology or results

appendix A

- Magazine and newspaper articles
  - may not be written by experts
  - may lack any sort of review for accuracy
  - may be used to provide examples or cases to support a point

Primary sources are materials that report first-hand information. In the field of history, primary source materials would include diaries, journals, maps, and first-hand accounts of historical events. In psychology, primary sources include journal articles or the proceedings of conferences in which new research is reported for the first time (generally by those who conducted the research).

Secondary sources are materials that evaluate or summarize primary source material. In the field of history, this could include a biography that refers to an historic figures papers or diaries. In psychology, secondary sources are reports of past research employed to provide evidence for a current argument. Because of the possibility that secondary reports could analyze or summarize information inaccurately, they are given less status as sources of evidence. Students should be encouraged to go to primary sources whenever possible for information and to use secondary sources very sparingly.

Step Two: Analyzing a Source

The best way to teach students to understand a primary source material is to analyze an example in a class setting. Select a reading from your syllabus and go over it in class using the principles of QALMRI (see below) and encouraging student input.

The following is taken with permission from: Kosslyn, S. and Rosenberg, R. (2001). *Psychology: The Brain, The Person, The World*. Appendix B. Boston: Allyn and Bacon.

How to Read, Critically Evaluate, and Write Research Papers

Science is a community effort. Only through the cooperation (and competition) of many people does scientific knowledge inch forward. Both to get a sense of what's happening at the cutting edge of the science of psychology and to learn how to write better research papers yourself, you need to read articles published in psychology journals. These articles report new findings and theories and document the latest progress in the field. At first glance, a journal article may seem hopelessly dense and difficult to understand. One goal of this appendix, therefore, is to give you a brief guide to reading such articles, as well as to provide you with pointers on how to evaluate them. In addition, this appendix gives you background and resources that will help you write your own research papers.

Using the APA Format

Most articles published in psychology, and most of the papers you will be asked to write in psychology classes, are organized according to guidelines provided by the American Psychological Association (APA) in the Publication Manual of the American Psychological Association [6th ed., 2009; you can find more detailed information about these guidelines and the manual at http://www.apastyle.org]. This standardized format not only ensures consistency across the scientific community but also helps authors to include all of the crucial information and allows readers to know what to expect. A paper that reports new research findings using the APA format follows this structure:

General Introduction. The General Introduction provides the context for the research. It consists of an overview of the topic being researched, describing previous studies on the topic, analyzing their flaws, pointing out gaps in what they examined, and noting contradictory findings. In this section, the authors introduce the general purpose of the study.

Study Introduction. Here, the study is introduced more narrowly, with background information supplied for the particular technique being used. If only one study is reported, this material is presented at the end of the General Introduction.

Method. The Method section explains, in detail, what was actually done, the type of method used (case study, quasi-experiment, and so on), and the specific details of how the study was conducted are provided. The goal is to describe the methodology in enough detail that someone else could repeat the study in precisely the same way. The Method section often has distinct subsections:

Participants. This section (or subjects [if animals were studied]) describes the nature of the people or animals that took part in the study.

Materials. This section describes the stimuli. For example, a questionnaire, words read aloud, pictures shown on a screen—all of these are typical materials in psychology studies.

Apparatus. This section describes the physical props or instruments involved in the study (for example, the type of computer and monitor used to present stimuli, as well as the monitor settings). The apparatus is used to present the stimuli (described in Materials) and to record responses.

Procedure. This section describes exactly how the study was conducted, step by step.

Results. The results section reports what happened. This section includes descriptive statistics (such as means and standard deviations) and inferential statistics (tests to determine which differences in and patterns of responses should be taken seriously).

Discussion. Whereas the Results section provides just the bare facts, the Discussion section seeks to interpret them, often referring to previous studies or theories.

General Discussion. One journal article may report several studies. After one General Introduction, separate sections ranging from Study Introduction to Discussion—as described above—are included for each study. After the last study is reported, a General Discussion ties them all together. A General Discussion typically begins with a brief summary of the sum total of the results and often ends with suggestions for additional research that would answer new questions raised by the results.

How to Organize and Evaluate What You Read and Write

Once you understand the structure of a journal article, you will find it useful to approach reading and writing such articles armed with what we call the QALMRI method. This method provides a means for critically evaluating a study in the literature, as well as for organizing your own study, and will help you see the connection between theory and data. That is, it will help you to be clear on what question is being asked, how to answer it, and whether the results really do support the preferred answer. In brief:

Q stands for the question. All research begins with a question, and the point of the

research is to answer it. For example, we can ask whether a placebo is better than no action in curing depression. The first few paragraphs of the General Introduction should tell the reader what question the article is addressing. In addition, the context provided by the General Introduction's review of previous studies should explain why the question is important, why anybody should care about answering it. The General Introduction should provide the general context, providing the reasons why the question is worthy of consideration.

A stands for alternatives. A good report describes at least two possible answers to the question and explains why both are plausible. For example, the possibility that the placebo is better than doing nothing is plausible because beliefs arise from the brain, and brain activity can in turn affect the endocrine system—which could in turn affect mood. And the alternative possibility, that a placebo is no more effective than doing nothing in combating depression, is also plausible.

The General Introduction should also explain what alternatives are being considered. When reading or writing the General Introduction, identify the question and then the alternative answers that will be considered. If the alternatives in a study you read are not spelled out, try to figure out for yourself what they might be; if the study is simply seeking to confirm a theory's prediction, try to get a sense of whether other theories (or just common sense) would make the same prediction. If all the theories make the same prediction, it probably isn't worth testing. When writing your own reports, clearly describe the alternatives and why they are plausible.

L stands for the logic of the study. The goal of the study is to discriminate among the alternatives, and the logic is the general idea behind the study—the way the study will distinguish among the alternatives. The logic is typically explained toward the end of a study introduction and has the following structure: If alternative 1 (and not alternative 2) is correct, then when a particular variable is manipulated, the participant's behavior should change in a specific way. For example, the logic of a study of placebo effectiveness would rest on comparing a group receiving a placebo with a group receiving nothing. (In all other respects, the groups would be treated the same.) The logic would sound like this: If the placebo has a curative effect (and doing nothing does not), then the people receiving it should report fewer symptoms than the people receiving nothing. Notice that the logic depends crucially on the question and alternatives. For example, if we had asked a different question, such as whether a placebo is as effective as antidepressant medication, then the logic would require that we include a group receiving medication—but given the way we have formulated the question, this isn't necessary.

M stands for the method, found in the Method section. When reading an article, or writing your own, consider the following. With regard to participants: How were they selected? Are they a representative sample of the population in general? If the study involves more than one group, are they equivalent on important variables, such as age and education? For the placebo study, participants in both groups should be of identical age, education, and health status. It is crucial that they have the same level of depression prior to the study and the same prior experiences with medication. With regard to materials: If questionnaires are used in the study, have they been shown to be valid (that is, do they measure what they are supposed to measure)? Are they reliable (that is, do they produce consistent results)? Do the materials used in different parts of the study differ inappropriately in important ways? For the placebo

study, one key would be the nature of the placebo itself: What did the pill look like? Did it resemble pills that the participants had already taken and knew to be effective? Did it taste like a sugar pill? Apparatus: Was a computer used? If so, exactly how did it present the stimuli? What other physical props were used? In the placebo study, were the pills dispensed using a special machine or just given in a bottle? Procedure: Try to visualize yourself in the study. Is it clear exactly what was done? How were the pills produced? How were the pills provided to the participants? Were there proper control groups? Were participants given appropriate instructions (clear, but not leading them on)? For studies using a placebo group, as in all studies, it is crucial that the investigator treat the participants in the two groups exactly the same way; if the investigator is cheerful and friendly to the people in the placebo group but distant and cold to those in the control group, it could be this treatment—and not the presence or absence of placebo—that affects the participants' feelings of depression. Such nuts-and-bolts concerns can make or break a study; if they are not properly handled, the results are ambiguous at best.

R stands for the results, found in the Results section. What happened? First, look for (when reading) or report (when writing) measures of central tendency (means, medians, modes) and some measure of the sampling variability (commonly, standard deviations). The actual results are descriptive. For example, the ratings of depression might be lower for the group receiving a placebo than for the group receiving nothing. Second, not all differences and patterns in the results should be taken seriously—some differences are simply quirks due to chance. Inferential statistics are performed to determine which patterns of variation are unlikely to have arisen due to chance.

For most studies in psychology, inferential statistics are used to assign a probability value to a comparison, noted as $p < .05$ (or $p > .1$, $p < .01$, and so on). This number indicates the likelihood that the difference occurred merely due to chance; $p < .05$, for example, means that the probability that the difference occurred due to chance is less than 5 in 100. Usually, any p value of .05 or less means that the result is considered "statistically significant"—you can be reasonably certain that the difference found in the sample reflects an actual difference in the population as a whole. For example, if an inferential test showed that the difference between the placebo and the control group was "significant at $p < .001$," that would mean that the difference would occur by chance less than 1 time in 1,000 if the study were repeated over and over.

[Measures of effect size are also commonly reported (e.g. confidence intervals, Cohen's d). These measures allow you to determine the magnitude of the effect observed, which can help you to know if it is really meaningful.]

Finally, **I** stands for the inferences that can be drawn about the question and alternatives, given the results. The Discussion section usually contains the inferences the authors want to draw from their results. If the study was well designed (the logic sound and the method rigorous), the results should allow you to eliminate at least one of the alternatives. For example, in the placebo study, the results might show that placebo really does help depression more than doing nothing. At this point, take a step back and think about potential confounds that could have led to the results. Were any alternative explanations not ruled out? And consider any loose ends. For example, perhaps the way the participants were treated when given the placebo is a major variable, and the effects of placebos can be enhanced or reduced by different

social interactions with the caregivers.

Using Online Sources of Information

How do you find research or other relevant material about a topic when writing a paper? For that matter, how do you evaluate the references cited in journal articles? To take advantage of all that the research community has to offer, you should be seeking online as well as print sources of information. Much of this was written using online sources. But as you probably know, the Web has at least as much misleading information as it has correct reporting. Nobody edits it, nobody monitors it, nobody certifies it. It's up to you to sort the wheat from the chaff.

How, then, can you find useful information on the Web, and how can you verify that it should be taken at face value? There are three general ways to use online sources.

Databases

First, if you already know of a likely source of information or a particular article, you can go directly to a specialized database, such as PsycInfo or [Pubmed]. PsycInfo is offered through many college libraries, and [Pubmed's] search is publicly available at [http://www.ncbi.nlm.nih.gov/pubmed/]. At a database, you can usually retrieve abstracts of articles simply by entering key terms (including the author's name, if you know it). If you have access only to an abstract, beware: Abstracts sometimes aren't written by the authors themselves, and even when they are, they necessarily simplify the study and its findings. This simplification is sometimes so extreme that the results can be distorted. Thus, we urge you to use abstracts only as a "first pass," to narrow down likely sources. If the results seem important, get the actual paper.

[In many cases, you can obtain an entire paper online,because most journals are now available as PDFs through the Hollis catalog. In addition, the American Psychological Association offers a site where you can read complete versions of all papers published in APA journals.] This site, however, is available only to members (including student members) of the APA and to schools or organizations that subscribe to the service.

Organizations' Web Sites

If you don't know which database to check, you can try the Web sites of relevant organizations, such as the American Psychological Association (www.apa.org). In this case, the challenge is to think of the most relevant organizations for your topic. In psychology, the two APAs (the American Psychological Association and the American Psychiatric Association) are good places to start. In fact, the American Psychological Association has a special online pamphlet for students—"Library Research in Psychology: Finding It Easily" (http://www.apa.org/science/lib.html)—and the American Psychiatric Association has links to many useful sources [http://www.psych.org/MainMenu/EducationCareerDevelopment/Library/BernsteinReferenceCenter/PsychiatryontheInternet.aspx]. You can also search the Web sites of other psychological organizations, such as the Society for Research in Child Development (http://www.srcd.org/) and the American Psychological Society (http://www.psychologicalscience.org/). Similarly, for many subfields in psychology, there are relevant national organizations with Web sites, such as the [American Association on Intellectual and Developmental Disabilities] (http://www.aamr.org) and the American Society for Clinical Hypnosis (http://www.asch.net/). Links posted on such sites have more credibility than those found through a search engine, given the likelihood that they've been approved by the parent organization. However, the

parent organization can't possibly ensure that all information on other sites is correct. So again, don't take what you find at face value. Look before you leap, and think before you quote.

Search Engines

Finally, what do you do if you're forced to cast your search more widely and browse the whole Web? You can simply use a search engine, such as Google (www.google.com) or Google Scholar [http://scholar.google.com/]. We've found that the best searches have as many specific terms as possible; the more terms you include, the more irrelevant cites will be weeded out. It's instructive to look at a dozen or so of the sites that turn up following a search. You may be shocked to discover how much inconsistency there is; not only can the summaries of the research differ but so can the evaluations and conclusions that are based on it. And sometimes the authors of the secondary sources (which summarize or discuss an original article) just get it wrong—they either describe the study incorrectly or misinterpret the implications of the results.

As a first step in evaluating a site, see whether five or six other researchers reach consistent conclusions. Moreover, evaluate the source of each site. Does it have a reputable host? Are you reading an actual published paper, an unpublished paper, notes used in lectures, or notes used by someone else in writing a paper? In general, the more evaluation that a given paper receives (as happens with published papers, but not student notes), the better. Also consider whether the material is up-to-date. Check the date to make sure that the work reflects the most recent research. This isn't to say, however, that time-honored and well-replicated older studies are any less credible because of their age.

In Sum

Reading Research

When you read a study, remember to read it in terms of both the big picture outlined above and the details. Figure out exactly what question the authors wanted to answer and what alternative answers they've considered. Can you think of others? Always be on the lookout for potential confounds and alternative explanations, and look for features of the study that limit how well its results can be generalized; for example, can you assume that the results necessarily generalize to other ages, races, or cultures? Be sure to read the footnotes. The single most important advice we can give about reading a study is to be an active reader: Think about what the authors are claiming, and think about whether it makes sense.

Writing Your Own Papers

The same principles apply to writing your own research papers. Write the Introduction so that the reader clearly understands the question you are addressing, why it is important (in the context of the previously reported studies on the topic), the alternative possible answers you will consider (including, in most cases, your "favorite" one—often called simply the hypothesis), and the logic of the design (the basic idea underlying the study). In the Method section, be sure to include enough detail to allow another researcher to repeat, exactly, what you did. In the Results section, first present results that bear directly on the question and alternative answers. These

results should be measures of central tendency and variability, which are often best presented in a graph. The results that address the question are most important— even if they are not as striking as some of the other findings. If your Introduction is clear, the reader is focused like a laser beam on the question and is waiting to find out which alternative answer is supported by the results. Don't keep the reader in suspense; present the results that speak to the question at the outset of the Results section. Finally, in the Discussion, return to the question and alternative answers, and discuss exactly what you can infer from your results. Have you shown that some of the alternatives must be discarded? Is only one viable? What should future research focus on to propel the field even further ahead?

When reading or writing a research report, always put yourself in the place of the intelligent reader. If a report has been written clearly, the reader will glide through it effortlessly, understanding what the author intended to convey, why the research was conducted in a particular way, what the discoveries were, and why the report is interesting and important.

Note: bracketed information in this appendix has been updated and does not reflect the original wording found in Kosslyn and Rosenberg (2001).

Finding Journal Impact Factor

The impact factor of a peer–reviewed journal is an index of the relative number of times articles from that journal have been cited by other researchers over the period of the previous two years. The higher the impact factor, the more able that journal has been able to attract reports of cutting edge research and theory; hence the more impact that journal has had in its topic area. To find the impact of a specific journal – or to find out which journals have the highest impact factor in a specific topic area:

1) Go to e-resources within the Harvard library system, http://library.harvard.edu/

2) Select Citation Indexes/Web of Science from the drop down menu and click go.

3) At the top of the green ISI banner in the middle of the screen select the "Additional Resources" tab.

4) Under Analytic tools, click on "Journal Citation Reports."

5) Select "View a group of journals by Subject Category" and press Submit.
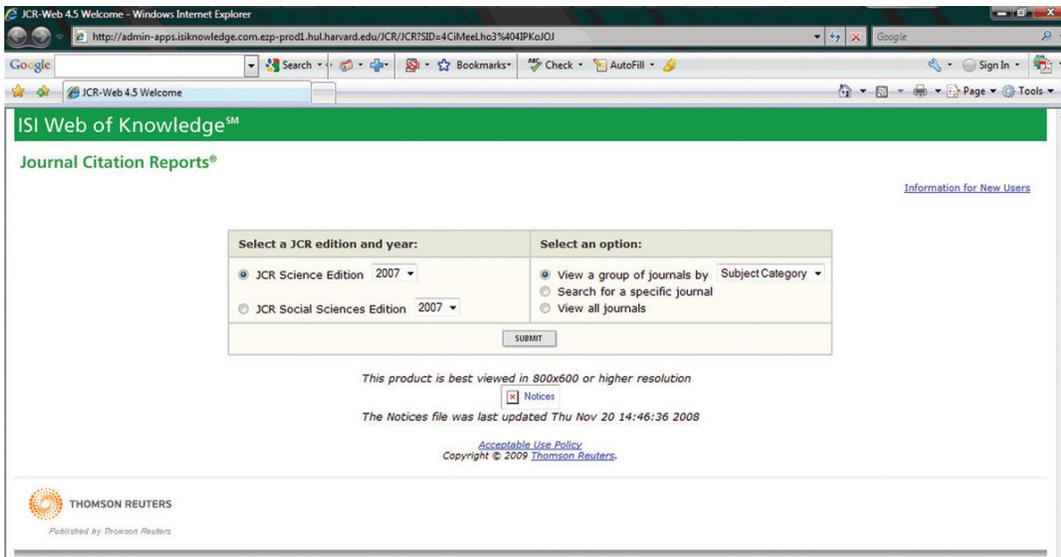
6) Select the journal topic area of interest and select "View Journal Data sorted by Impact Factor" from the drop down menu. Press Submit.
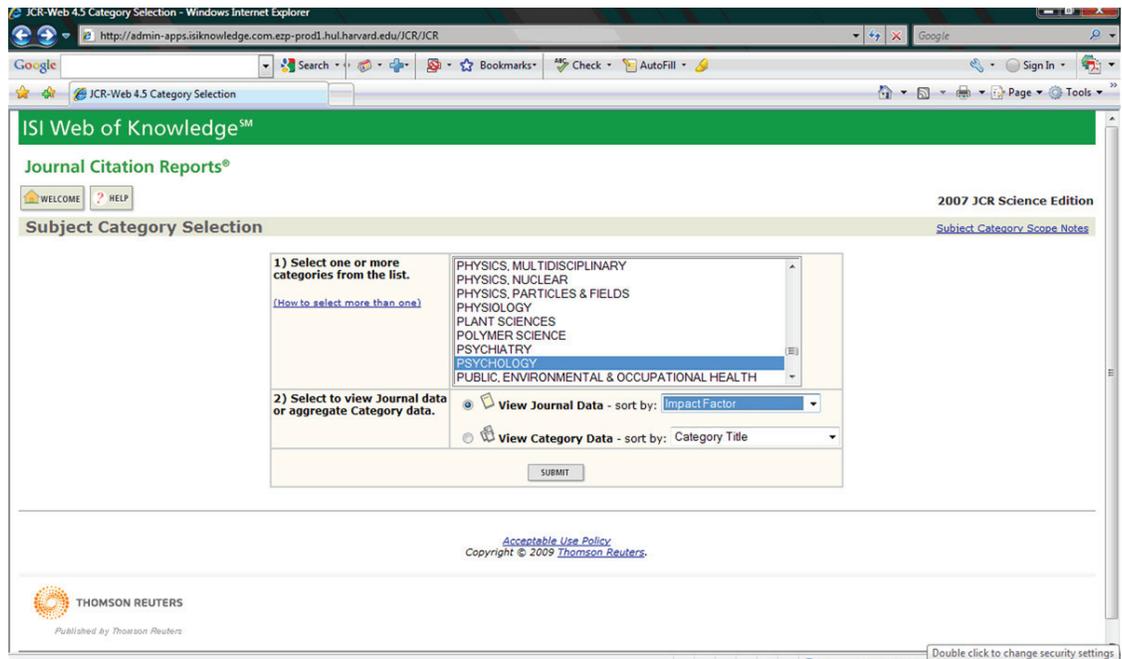
7) Journals will then be displayed by impact factor.
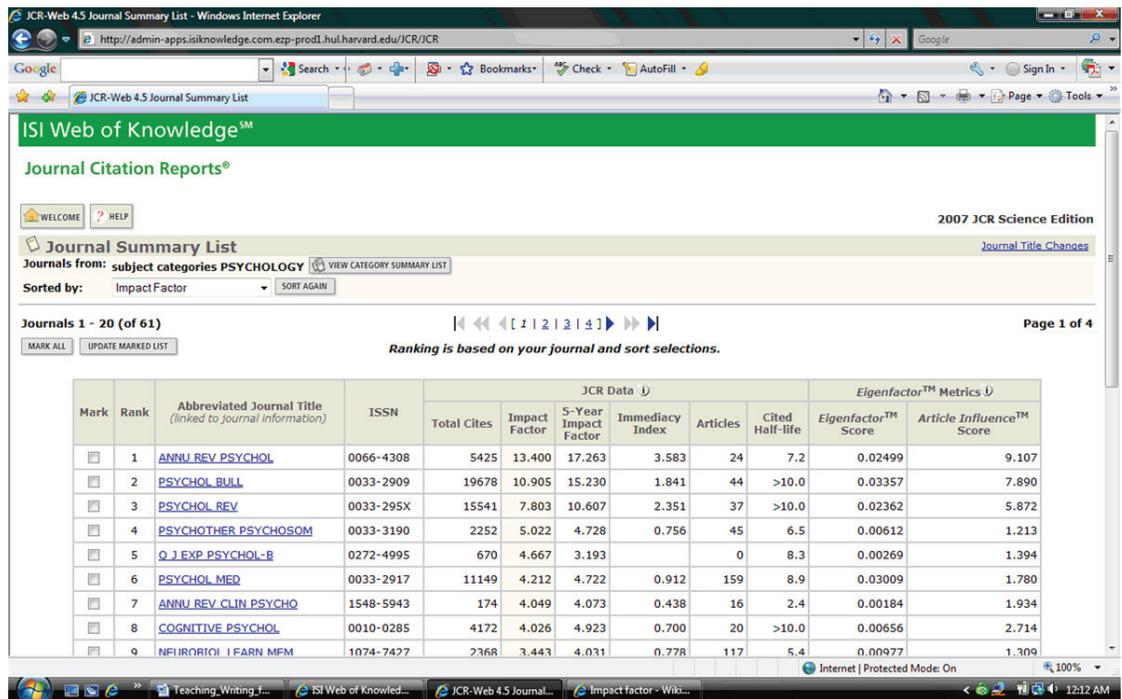
Do's and Don'ts of Effective Writing in Psychology

by Shelley Carson

The primary purpose of APA style is to report information and findings in the field of psychology. Its goal is a **clear, concise,** and **orderly flow of ideas** presented in a scholarly and objective manner. Appropriate citation of the work of others is also paramount. The following do's and don'ts of writing are based on mistakes (both APA style errors and scholarly writing errors) commonly made by beginning writers in psychology. Many of the points raised earlier have been boiled down and summarized here, as well as more detailed points that bear specifically on APA rules. ***Do*** check your paper against this list before turning it in!

APA Style Errors:

1. **Don't write a novel**. Do not weave a tale of suspense complete with foreshadowing, flashbacks or surprise endings. *Don't* wait until the end of the paper to give the punch line!

    Do tell a story. Your paper should be a straightforward tale of a circumscribed question in want of an answer. The answer is your thesis, and you are going to tell the tale of why your thesis is the answer to the question. Keep it simple and direct.

2. **Don't try to "prove" a theory.** In science, you cannot prove a theory (although you can disprove one). The best you can hope for is that a theory accounts for the known data. There is always a chance that new data will come along that disproves the existing theory, and the theory will then have to be revised. So all theories in psychology (as in other scientific fields) are provisional. Therefore, it is incorrect to talk about "proof" in psychology. You are better off comparing and contrasting two or more alternative theories (or hypotheses), and showing that the weight of the evidence favors one of them.

    > **Example** (avoid): This proves that Bellows' (1998) theory was right.

    Do support the theory. Even though you cannot prove a given theory, you can certainly provide support for it in the form of evidence.

    > **Examples** (preferable):
    >
    > This study provides support for Bellow's (1998) theory.
    >
    > The results of this study are consistent with Bellow's (1998) theory.

3. **Don't overuse low-value sources of evidence.** Not all sources of information are equal. Newspapers, popular magazines, and best-selling books are considered lower-value secondary sources. They may best be used to provide examples or case studies, but cite these

sources sparingly.

Do **use high-value journals and professional books as your main sources of scientific evidence.** The highest value sources of scientific evidence are peer-reviewed journals. Many of these can be located online through the Harvard Library System (see Appendix), or in hard copy in Widener or the Social Relations Library (William James Hall). Articles in peer-reviewed journals have been subjected to review by experts in the appropriate field of psychology. (Note that the APA gives preference to professional journals by capitalizing each word in the journal name.) Trade or professional books are also high-value sources (although these books are generally not subjected to peer review. APA capitalizes only the first word of a book title). The bulk of your reference section should be composed of articles from professional journals and chapters from professional trade books.

4. **Don't** **editorialize.** Avoid evaluative terms such as "horrible," "ridiculous," "indefensible," etc. Let the facts you present speak for themselves.

    Examples (avoid):

    "It would be foolish to ignore the evidence in favor of this theory."

    "This study completely failed to prove the author's point."

    "It is obvious that [this theory] is correct."

    Do **express your point of view through an objective presentation of evidence.** One of the main goals of scientific writing is the **objective** reporting of information. Of course, you will have a point of view (your thesis). You want your readers to arrive at the same conclusion that you did by objectively weighing the evidence that you present.

5. **Don't** **overuse secondary sources.** If you find that you are using more than two or three "as cited in" references, then you need to get hold of the original articles and read them for yourself. Whenever you take one author's word for what another author has reported, you run the risk of misinterpretation. Use these secondary sources very sparingly. (Textbooks are considered secondary sources. They are summaries and interpretations of the work of others. As a rule, you should not cite textbooks in your paper.)

    Do **read the work of all authors whom you cite.** Remember that you are responsible for the accurate reporting of the work of others. When you cite an author directly, the assumption is that you have read the work in question.

6. **Don't** **overuse technical jargon.** Psychology, like all scientific fields, has its own jargon. However, the more jargon you use, the more you narrow the audience who will "get" your paper. Strive to make your paper comprehensible to an audience with a good general education.

    Do **define key terms.** If you must use a technical term, be sure to define it (either directly or by using it in a context where its meaning becomes apparent).

    Example (preferable):

    "Expressed emotion (EE) refers to the amount of hostility, criticism, or overinvolvement by family members directed toward the patient."

Also, be sure to define your specific intended usage of terms that may have multiple meanings or connotations. (The word *aggression* has one meaning for sports psychologists, a different meaning for psychopathologists, and still a different meaning for animal psychologists. Its spe-

cific meaning in your paper should be defined.)

Example (preferable):

"Aggression, for the purposes of this paper, is defined as any case of unprovoked attack (hitting, biting, or kicking) upon another child."

7. **Don't overuse direct quotations.** Remember that while quotations from experts may be considered "evidence" in many liberal arts disciplines, the opinions of others are not considered evidence in scientific fields. Direct quotes interfere with the flow of ideas and should be used sparingly. Beginning writers in psychology often flood their papers with direct quotes from published researchers.

Example (avoid): Seidman et al (1997) have stated that for ADHD "the impact on society is enormous in terms of financial cost, stress to families, disruption in schools, and its potential for leading to criminality and substance abuse" (p. 150).

Do rephrase and summarize the important points of other writers (properly cited, of course!) in your own words. Paraphrasing improves the flow of ideas.

Example (preferable): Seidman and his colleagues (1997) suggested that the social impact of ADHD is enormous, including financial costs, family stress, school disruption, and the potential for criminal behavior and substance abuse.

8. **Don't use footnotes or endnotes.** The interruption of shifting one's eyes to the bottom of the page or (worse!) to the end of the paper to read a note detracts from the orderly flow of ideas.

Do incorporate footnote material directly into the body of the paper. The APA guideline is: if it is important enough to include in the paper, put it in the body of the text. If it is not important enough, delete it altogether!

9. **Don't substitute synonyms when expressing a given concept or vary sentence structure in an attempt to make your sentences more interesting.** Using different words or phrases for the same concept will only confuse your readers.

Example (avoid): Extraverted children demonstrate anger when their play is interrupted, whereas, contrary to their more outgoing counterparts, youngsters with an introverted temperament, do not get mad when their activities are interrupted.

Do attempt to use the same words or phrases each time you express a given concept to promote clarity. Parallel sentence construction also promotes clarity.

Example (preferable): Extraverted children demonstrate anger when their play is interrupted, whereas, introverted children do not demonstrate anger when their play is interrupted.

10. **Don't write in First Person.** Avoid reporting First Person personal anecdotes, as well as phrases such as "I feel…" or "I believe…"

Examples (avoid):

"My Aunt Chloe had the same experience with depression…"

"I feel like Crespi and Cameron (1992) should have included a placebo control group in their study…"

Do write in Third Person.

    Examples (preferable):

    "Chloe Johnson (personal communication, April15, 1999) reported a

    similar experience with depression…"

    "However, Crespi and Cameron (1992) did not include a placebo control group in their study…"

11. **Don't use present tense.** As a rule present tense use is discouraged and is used only when describing currently-held theories. When describing work that occurred in the past, use past tense if the work occurred at a specific time and present perfect tense is the work occurred spanned several studies or several researchers.

    Examples (avoid):

    William James, in his 1890 treatise, examines how different researchers conceptualize the unconscious.

    Carlyle revisits this question in a series of studies (1992; 1994).

Do use past or present perfect tense. These tenses are preferred for actions that have already occurred.

    Examples (preferable):

    William James, in his 1890 treatise, examined how different researchers conceptualized the unconscious.

    Carlyle has revisited this question in a series of studies (1992; 1994).

General Scholarly Writing Errors:

1. **Don't make your thesis a guessing game!** Your reader should not have to guess at the main point of the paper.

    Do formulate a restricted and concise thesis. Make your thesis very clear and narrow enough in scope that you can thoroughly address it in your paper. State the thesis early in the paper (first or second paragraph). Then do not wander away from the thesis.

2. **Don't expect your reader to automatically understand the importance of your thesis.**

    Do present a motive for your thesis early in the paper. Why is your thesis important? What larger question or problem will your thesis, when properly supported, make strides toward answering? Give your reader a reason for wanting to read your paper.

3. **Don't use vague pronouns.** If your reader must retrace the previous sentence to determine whether "he" refers to the participant or the experimenter of a study you are describing, then clarity has been compromised.

    Do check your pronouns. Make sure that each pronoun in your manuscript has an obvious referent. One good rule is to replace all simple pronouns (this, that, these, those) with the appropriate noun or noun phrase.

    Incorrect: This indicates that creativity and IQ may be correlated.

Correct: The results of this study indicate that creativity and IQ may be correlated.

4. **Don't use passive voice.** Passive voice often makes the object of a sentence into the subject and forces the reader to retrace the action in order to understand it.

   Example (avoid):

   A connection was found by these researchers between creativity and IQ.

   Do use active voice whenever possible. Active voice moves the story forward and improves the flow of the writing.

   Example (preferable):

   These researchers found a connection between creativity and IQ.

5. **Don't include more than one idea per paragraph.** If you have a paragraph that takes up an entire page (double-spaced), check to see if it includes two or more ideas that can be divided.

   Do keep paragraphs and sentences relatively short. Shorter sentences and paragraphs promote clarity. As a rule you should have 2-3 paragraphs per page. Sentences should contain no more than 15-20 words. You may intersperse shorter sentences, but avoid sentences as long as 30 words.

6. **Don't use colloquialisms.** Your writing should be scholarly, rather than conversational, in tone. A scholarly tone does not imply pretentiousness of language but rather an avoidance of colloquialisms that could interfere with precision and clarity.

   Do choose language that is precise, clear, and scholarly. Some examples:

   Examples:

Avoid	a whole lot	on the mend	just around the corner	write-up
Preferable	numerous	recovering	upcoming	report

7. **Don't treat opposing points of view unfairly.** One mistake often made by beginning writers in psychology is called "bashing the counterargument." This technique includes finding very tiny methodological flaws in studies that contradict your thesis and using these flaws to completely discredit the opposing research results. The same microscopic flaw detection is not, however, employed when evaluating research supporting your thesis. This uneven handling of evidence generally backfires, as most readers will sense the unfairness and pull for the underdog!

   Do present all sides of your argument fairly. Science is generally not black and white. You do not need to discredit all evidence that fails to support your thesis. You merely need to show in a convincing manner why your thesis is the best fit for the existing data.

8. **Don't write a single draft of your paper.** No one can write a good paper in one draft!

   Do revise and edit your paper! Revise, proofread, and then revise and proofread again!

Here are some strategies for revising and improving the quality of your paper:

1. Lay it aside for 48 hours and then reread it. You will see many areas for improvement that were not apparent to you during the initial writing.

2. Read it out loud. It is often easier to hear (rather than see) sections that are unclear or awkwardly worded.

3. Give a copy to a friend (but be sure to proofread it first!). Then don't argue if the friend finds a section that is unclear. By definition, if it is unclear to your reader then it is unclear period!

4. Don't get too attached to a particular phrase, sentence, or paragraph. You have to be able to edit out anything, no matter how cleverly-worded, that does not advance your story.

Templates for Peer Editing

Template A is a modified Bok Center peer review form which psychologist Debra Sorensen adapted for use in psychology classes. Template B is from the Bok Center's Graduate Writing Fellows Program. Template C was created for this guide. They may be used or modified as you wish.

Template A

Writer:_____

Reader: _____

RECORD YOUR RESPONSES TO THE FOLLOWING QUESTIONS EITHER IN THE SPACES BELOW OR ON A SEPARATE SHEET(S) OF PAPER.

What do you think is the writer's main point?

What is the writer's thesis statement?

List two things you like about this paper.

List two ways in which this essay could be improved.

What in the paper was confusing to you? What questions are unresolved?

appendix D

Template B

Writer: :_____

Reader: :_____

RECORD YOUR RESPONSES TO THE FOLLOWING QUESTIONS EITHER IN THE SPACES BELOW OR ON SEPARATE SHEET(S) OF PAPER.

Read the paper through once, rather quickly, without pausing to write comments. Then put the paper aside and answer the following questions without looking back. (If you cannot answer the question, write "don't know.")

1.   What single thing in the paper stands out to you as a reader?

2.   What do you think is the writer's main point?

3.   Was there anything in the paper that seemed confusing to you? (If so, explain briefly).

Now reread the paper, making any comments in the margins you feel would be helpful. Try to comment on development and organization of ideas: Do you understand the points the writer is trying to make? Do ideas seem well–connected? **Remember, you are not being asked to evaluate the paper; you are being asked to respond to it with an eye toward helping the writer improve it.**

4.   Underline the thesis statement. Is it clearly stated? If not, what seems confusing?

5.   Is there any place where the writer needs to support an idea with more concrete detail or explanation? If so, where?

6.   How well does the writer make transitions between his/her main points? Identify places that need better transitions.

7.   List at least two ways in which the essay could be improved.

8.   List at least two things you like about the paper.

9.   What would you like to know more about? What questions do you still have?

10. Ask of the essay "so what?" after you finish reading. Write a sentence or two paraphrasing the point of the paper, answering the question: "In what way(s) is this interesting, surprising, intriguing, etc.?" If the paper lacks a "so what," point that out and discuss the possibilities.

Template C

Reviewer: _____

Title of Paper: _____

Author: _____

1. What is the general topic area of the paper?

2. What is the author's thesis?

3. What two or three things would you like to see improved or strengthened in the next draft?

4. What are two or three strengths of this paper?

5. Please attach 3-5 abstracts of articles that may be useful to include in the literature review.

How to Help Students Choose a Paper or Thesis Topic

by Erin Driver-Linn

Not infrequently, sophomores and juniors who are not yet affiliated with a lab will say, "I want to do a thesis, but I don't think I should because I don't know what I want to study." Here are some dialogue gambits that I've used, depending upon the student, to try to help them discover and hone their interests. This method, called RAsCAL, can be used to help a student focus his or her interests to develop a thesis *for any paper or writing assignment*.

First step: Reassure.

- Almost anyone who has worked on a difficult project has felt directionless or unmotivated at one time or another. In fact, I've felt this way myself and have been able to get over it.

- It isn't necessarily clear that just because a driving question has not yet emerged, that it won't.

  Abstract problems take a long time. Focusing questions is hard work. You know how to work hard and it is just a matter of sussing out the process.

- There are different phases to the process of producing an original work; one of the hardest phases is the first, when there is likely to be a lot of amorphous interest (interested in too many things to focus) and/or a lot of ignorance (interested in something about which you know little to nothing).

Second step: Assess.

- Why don't you tell me a little about the things you are doing. You can learn a lot about your interests by comparing what you actually do with what you say you like to do. For example, I say and believe that I like philosophy, but if I have a good novel and Nietzsche on the night-stand, I finish the novel and another before returning to "Beyond Good and Evil."

- You don't need to tell me, but spend a little time pondering your secret interests, the things you like to think about that you worry might be too kooky to bring up in class or to your friends. Often there is firmament just below mud.

- Do you have several interests that you tend to keep separate from one another—say, a passion for the violin, a budding interest in the stereotyping literature of social psychology, and a devotion to helping children with ADD? We are story-making machines, so just try, for fun, to build a story about how these things could go together. Sometimes a thematic interest lies in the space between domains and an explicit "bridge" or "cul-de-sac" can be informative.

Third step (used with caution): Challenge.

I've found that some students need a little "heat."Without it they will regurgitate scripts, or have a little bit of an attitude, like "oh, here we go again—don't bother because nothing is going to help me with these excruciating doldrums," or, in the assessment part of the conversation will be wildly all over the place, like "Yeah, I only get excited by biological science psych and law is fascinating I think I would be truly satisfied if I could understand consciousness."

• Ok, so I'm hearing you say this, and I'm hearing you say that. There seems to be a contradiction. Contradictions are ok, but they are worth paying attention to because they can pull your interests in two competing directions.

• I get the feeling you want to be interested in this area, but really aren't. Am I misreading?

• It sounds like you've shifted from idea to idea because you've found that they don't hold your interest. Does most of the stuff you are doing bore you? Tell me one thing that doesn't bore you.

• Actually, it sounds to me like you have a pretty good handle on your interests but that you are afraid to commit. Do you know the term "risk-averse"?

Some students will seem to "wake up" and be more interested in the conversation after such a challenge. Others will be a little defensive. If they disagree and are defensive, I tend to back right off, because I feel pretty sure that just posing the question is enough.

Fourth step: Assign

• Let me tell you about a technique that has worked for me. It sounds nerdy, but keep a notebook. Anytime you find something interesting, even if you have no idea why, write it down. When you are reading articles for class, if a particular phrase catches your attention, write it down. When listening to music, and a lyric stands out, write it down. At some point, even after a few days, take a look at your notations. Usually, with a little hard thinking, you can organize them by content and find one or more common themes.

• Ok, this is a good beginning conversation. A dialogue is helpful for extracting ideas. Come back to me with 3 ideas, no matter how unformed or how unconnected and we'll talk about them. I will push you on each of those ideas, by asking you what you mean, why you thought of it, etc.

• Take a look at the faculty web site. Read about what they are doing. Pick three faculty members whose work interests you. Go out and actually get some of their most recent papers. Read them. You might find that you can think of logical, interesting extensions. If so, email them directly, or come back to me for a "firming up" conversation, or send me a draft if you want and I will look over an "I'd be interested in working with you" email.

Fifth step: Limit/Warn

• Your next step is to turn a short list of interesting thoughts into a concrete question. If you are really having trouble doing this, limit yourself to one research area, or lab even, and then play with ideas within the (self-imposed) constraints of that research area.

• You've got some time, but not a lot. Take this week/month/semester to reflect and monitor what

you do and what excites you, and then, try making a "decision" by writing down a draft title for your paper (or thesis).

- In some ways, although it might not feel like it now, this is the fun part of the process. When trying to come up with what you are going to study you can play, and dream, and think about things in grandiose terms. In my opinion it is great to think ambitiously, to be broad, for a time. However, you will have to eventually commit to a question at least enough to begin doing research toward the prospectus

Finally, if intractable, RAsCAL can be repeated.

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