
Guide to Writing Lab Reports

An important aspect of your experience in this lab course is to learn to report the results of a psychological investigation.

The aim of a research report is to inform the reader about an experiment or study, its procedures, its purpose, and its outcome. Communication is best accomplished by being concise and presenting the report in a standard form. Enough detail should be presented in a technical report to permit a conscientious scientist to reproduce the experiment or study.

Reading journal articles will provide you with an idea of the form and content of your own lab reports. Your professor can point out journals that publish relevant articles. Recent volumes of some of these journals are in the Barnard Library. The Psychology Library on the 4th floor of Schermerhorn (on the Columbia campus) has all the important journals in its stacks or on reserve at the front desk.

General Format

All parts of lab reports should be typed **double-spaced** with 1 to 1-1/2 inch margins all around. Do not justify the right margin. All pages are numbered in the upper right corner on the same line as a page header consisting of the most key one or two words of your title. Include the header and page number even on the title page. If you use a word processor, use the underline function, not the *italic* function, for elements (such as the title of a book), which would be italicized in a published article.

Lab reports consist of these parts:

- Title Page
- Abstract
- Introduction
- Method
- Results
- Discussion
- References
- Tables/Figures

The authoritative source for the preparation of experimental reports in psychology is the *Publication Manual of the American Psychological Association* (4th edition). We will follow the conventions in the manual. Reference copies of the manual are available for use in the Psychology Department office (415E Milbank), and at the Reserve Desk in the Wollman Library.

A Suggested Order for Writing a Lab Report

Although your final report will contain all sections in the proper order, a good way to start a report is to write the most clear-cut section first: the Method section. The Method section tells what you did and how you did it.

Next, write the Results section detailing what happened. Results may be presented in three ways: in a table, in a graph, or in the text. You should work on these three forms of presentation in that order. Make the necessary tables that depict the results numerically; then make graphs. Graphs should be computer-generated. There are graphics applications in Excel available in computer clusters. It is not necessary to have both tables and graphs in your lab report, particularly if they present the same data. Choose the type of format that makes your data most understandable. Before beginning to write about your tables and graphs, take some time to study them. Ask yourself these questions: How consistent are the data? If changes occur in the dependent variable, how can those changes be best described quantitatively? At what points do the changes occur? How do the measures vary with changes in the independent variable? Most important, are the results statistically significant? You should then describe the results in relation to the conditions of the experiment. Your lab instructor will often provide suggestions for the presentation of data.

The next section to write is the Introduction, relying on your knowledge of the literature relevant to your particular experiment. A good Introduction describes prior work in the area and the goals of your research, relating your goals to previous findings. After writing the Introduction, write the Discussion section relating the findings you described in the Results to the themes you described in the Introduction. The Abstract and References should be written last.

Editing Your Report. The goals of conciseness and clarity can only be achieved if you are a patient and careful editor of your writing. So, sit back and read your first draft. Is the meaning of each sentence clear? Have you omitted any important details necessary for understanding the report? Are there any repetitions that can be omitted without sacrificing clarity? Is the content of each section appropriate? Check what you have written carefully, and you will be ready to create the final draft of the report.

An excellent way to spot awkward or wordy writing is to read the report aloud.

Tone and other Issues

Tone. Sentences in the report should be clear, concise and to the point. Often a series of simple sentences is preferable to a single complicated sentence. Don't use exotic or complex words if plainer words will do.

Organization. The way a laboratory report is organized is important. Do not violate the standard structure by putting material in the wrong place. Avoid describing the experimental details in the Introduction, and do not write about results in the Method section. If the Procedure portion of the Method section includes a chronological sequence of different facets of the experiment, preserve this sequence in the text of the following sections of the report.

Ambiguity. Avoid ambiguity in your lab report. Make sure that statements made in the same or different sections do not contradict each other. A common error is to refer to data without being specific: "The change in rate was rapid..." etc., when there were several rapid changes in rate; "the response rate was high (or low, or moderate, etc.)..."

Such descriptions need a referent—high relative to what rate? “These findings were not clear-cut...”—what makes findings clear-cut? Make sure the reader knows what you mean!

Anthropomorphizing. One common trap for the writer of research reports is to interpret the findings in an anthropomorphic tone, attributing human characteristics to inanimate or non-human objects. For example:

The animal responded faster because it was *frustrated*.

The rat got *tired*, as is shown by the changing slope of Figure 1.

After a few reinforcements, the rat was pressing the bar *subconsciously*.

During extinction, the rat became *angry* and *decided* not to press the bar.

These statements include inferences about the data that are probably not inescapable conclusions. After all, if your subject responds faster or slower on some trials, you cannot presume tiredness or frustration as the cause without other evidence. You might be able to design a test of these statements that really are hypotheses about the causes of the events you observe in your experiment. But unless your study collects data on the subconscious activity of your subject, it is better to offer a modest interpretation of your findings that avoids such speculations. A scientist relies on theory and evidence to interpret an experiment, and so should you.

Subjective Inferences. Most of the statements in the paragraph above are actually equally problematic when made about human participants. You must carefully establish that fatigue or anger are causes of human behavior, don't simply infer that “I would be angry in this situation.”

Repetition of Terms. For terms that appear frequently in your report, write out the term the first time it is used, followed by the abbreviation in parentheses. You may then abbreviate later uses of the term. (But, no abbreviations should appear at the beginning of a sentence.) Do not, however, abbreviate too many terms in your report. Sentences such as: “The effect of SRI on HTMB may be mediated by SRC” are unintelligible.

Style. Scientific writing is descriptive, and personal memoirs are inappropriate. When you write a lab report, you are a scientist examining the behavior of your subject(s). This tone may lead to the frequent use of passive sentences. But this use is stylistically objectionable when too many such sentences are strung together. Often a little thought will permit you to avoid both first person (I, we) and the passive voice. Consider:

(Poor:)

I administered the participants twenty trials in a session.

The participants were administered twenty trials in a session.

(Better:)

A daily session consisted of twenty trials.

The past tense is almost always used in reporting, since the experiments have been completed when the report is written. And, since the data have already been analyzed when the manuscript is prepared, you should refer to the outcome of such analyses in the past tense. However, you should use the present tense when you make reference to

graphs or tables (e.g., Figure 1 shows...). Here you are making a statement about the report that is present at the time of reading and not about the experiment or the analysis you carried out—that are past.

You may also make statements about your conclusions in the present tense because this will tend to involve your reader. These statements pertain to summary propositions, for example:

Short-term memory *is* able to hold about seven chunks of information.

The Sections of a Laboratory Report

(Note: Some sections of the report do not have a section heading in the text; one example is the cover page. If the name of a section should be omitted in the actual report, then it is given in this text in italics and followed by an asterisk.)

*Title Page**

The title page is the first page of the lab report. It contains the title, author, institution, and running head. Your Laboratory Instructor will specify any additional information required on this page.

Title. The title is centered on the page. (This means centered in both vertical and horizontal planes.) The first letters of all major words of the title are capitalized. In general, titles are detailed enough to distinguish one article from another. The title should reveal the central point of your experiment (the topic being studied, or the hypothesized outcome). An easy way to write a title is to identify the dependent and independent variables of the experiment, for example: Y as a Function of X, or The Effect of X on Y. In both cases, Y refers to the dependent variable (the behavior being studied or the hypothesized outcome), and X refers to the independent variable (the environmental conditions being controlled or manipulated or those variables you have measured as *predictors* of a particular outcome criterion). Read through some titles in the reference section of your textbook (especially articles which concern subject matter similar to the experiment you are writing up) for appropriate examples.

Examples:

The Effect of Food Deprivation Level on the Rate of an
Operant Response Reinforced with Water in a VI Schedule

OR

Simple Reaction Time as a Function of Intensity
of a 1000 Hz Tone for One Human Subject

OR

Personality Correlates of Loneliness in
a College Student Sample

Your name (as author) should appear centered and double-spaced directly below the title. Double-spaced and centered underneath your name appears the institution with which you are affiliated—in this case, Barnard College.

Running Head. The running head can be up to 50 characters long, including spaces and punctuation. It is entirely capitalized and typed flush left at the top of the title page (but below the manuscript page header and number), preceded by the words **Running head**, followed by a colon.

Example:

Running head: FOOD DEPRIVATION AND RESPONSE RATE

Page Numbers. Each and every page (including the title page) of your manuscript should have a one or two word short title and the page number in the upper right corner. Use the Header function in your word processing program to have this appear at the top of each page in your paper. Number every page, including the title page. Only figures are not numbered.

Example:

Food Deprivation 1

Abstract

The second page of the lab report is the Abstract. The Abstract is a capsule version of the lab report. It serves two purposes: 1) It provides the person scanning through the journals with a quick overview of your study; and 2) for the person who has read the study, it acts as an easy reference to the main features and findings of the study. The abstract is short (100-150 words), but it should reflect material from each part of the report. The main aspects of the method must be presented, and the important results must be stated, together with a hint of the discussion.

When typing the abstract page, the word “Abstract” is centered at the top of the page, with the text beginning two spaces below. Unlike other sections of the lab report, the first word of the abstract is **not** indented. The abstract appears on its own page, immediately after the title page.

*Introduction **

The Introduction begins on a new page following the Abstract (p. 3). The title of the report is centered at the top of the page, and text begins two spaces below with the first line indented. *This section is not labeled “Introduction.”*

The Introduction should contain background information on the study. It defines concepts described in the study and gives the reader the theoretical bases for any predictions or hypotheses you propose. Be sure to introduce the overall topic early in the introduction. What makes this an important topic of investigation? A research report is not a mystery novel. More often than not, your experiment is an outgrowth of prior studies, whose findings you are attempting to extend, validate, disprove or replicate. Therefore, you should mention the specific contributions of related studies. Use the information from previous research reports to build a logical argument, the conclusion of

which is the hypothesis of your experiment. Your introduction should provide the reader with an understanding of WHY this experiment was performed.

In the closing paragraph of the introduction you should state the **specific** goal of your study. At this point you should define all variables and provide a statement of your hypothesis. Clearly indicate what results were expected and what they will mean. *This is a critical part of the report, which links the introduction to the method and results sections.*

Citation of references. References are cited in the Introduction and throughout a lab report. In research reports, it is unusual to quote the writing of other scientists directly. Most often, the methodology, results, and conclusions of other research reports are described **in your own words** and then the research report is credited by citing the authors using the following format:

Hippocampal lesions impair spatial memory of rats (Smith, 1984).

If you are describing the history of a particular line of research, issue, or controversy, it may also be appropriate to use the following format, which places greater emphasis on the author.

Smith (1984) showed that hippocampal lesions impair spatial memory. Later, Jones (1986) found that lesions of the frontal cortex have a similar effect.

Page numbers are used only for direct quotations from any source (remember, direct quotations are used rarely and only when an issue cannot be easily stated in your own words):

As Sidman has pointed out (1960, p. 23), "a new conception of the problem..."

When several different experiments are referred to as a group, it is customary to include an alphabetical list of the authors' names, as well as the dates of publication within the parentheses, separated by semi-colons:

Applications of this method (Alder & Dallard, 1959; Blough, 1948; Gourevitch et al., 1960) have shown that...

When an article with two authors is cited in parentheses in the text the names are separated by an ampersand (Abbott & Costello, 1940). When the citation is directly in the text and not parenthesized, the authors' names are separated by "and":

In their landmark study on American humor, Abbott and Costello (1940)...

When there are more than two authors, the first time the article is cited, write out all of the authors' names; in subsequent citations of the same article, only the first author is mentioned, with *et al.* indicating "and all."

Method

The Method section describes the conduct of the study—the subjects, experimental equipment or apparatus, experimental design, the procedure (sequence of experimental

conditions), and the measures used. It should provide the reader enough information to replicate the experiment (please assume that your “reader” is a psychologist in your field, not your roommate!)

The heading is centered immediately after the Introduction, with no page break between sections. Again, which of these subheadings you use depends upon the type of study you are reporting. In most laboratory experiments, Participants, Apparatus (or Materials) and Procedure are standard, however you should check with your lab instructor about any additional sections require for your report. In most social psychological and field studies, the subheadings Procedure, Sample and Measures are common. Each subheading is underlined and text begins on the next line.

Participants

Identify the subject(s) of your experiment by age and sex. If nonhuman animal subjects are used, you must also report the species, the strain or breed, and its place of origin. (“Subjects were 10 adult male Sprague Dawley CD strain rats from the Charles River Laboratories.”) In addition, watering and feeding schedules should be indicated as well as the light-dark cycle in the housing facility. (“The subjects had *ad lib* access to food and water except for a 23-hour food-deprivation period before experimental sessions and were housed on a 14:10 hr light-dark cycle with lights on at 7:00 am.”) If the subjects or participants have previous experimental experience, this should be described briefly. If human participants compose the sample, give a brief demographic profile: “Respondents were 100 Columbia University students (50 men, 50 women), of age 19 to 21, who identified themselves as smokers.” In such cases, it is advisable to avoid the impersonal term “subjects” and use instead a more descriptive term when possible, such as “participants,” “individuals,” or “respondents,” or, more specifically, “college students” or “children,” (or whatever else might be applicable).

Apparatus

Identify any unique experimental equipment used and describe any distinctive features, such as model numbers. Remember to provide enough detail for the experiment to be replicated. Disposable supplies (paper, cotton swabs, rat chow) and common “equipment” (computers, pencils, pens, scalpels, stereotaxic apparatus) should not be listed here. They should be mentioned as appropriate in the Procedure section. Normally, only unusual supplies, or unique (built by the experimenter) equipment are described in this section. For many reports, no Apparatus section is necessary.

Design

If appropriate, a design section should be included in which the type of experimental design is specified, along with the independent and dependent variables. Here is an example:

Design

The experiment conformed to a 3 x 2 mixed factorial design. There were three levels of the orienting task variable, which was manipulated between subjects. The three levels were orthographic, rhyme, and semantic encoding instructions. There were two levels of the word class variable (concrete and abstract), which was manipulated within subjects. The dependent variable was the proportion of words recalled.

Measures

In the Measures section, briefly describe the scales that you used, for example, the State-Trait Anxiety Scale (Spielberger, 1969), always citing the reference where the scale can be found. This is only appropriate when you are using a test instrument designed and published by another scientist. This brief description often includes: the number of items in the scale; reliability and validity coefficients (if available); the response format (for example, that the items were answered on a five-point “Strongly Agree” to “Strongly Disagree” Likert-type scale); and any modifications you made in the scale for your study. Check articles in the *Journal of Personality and Social Psychology* to see models of a *Measures* section.

Procedure

The Procedure tells what you did (not what happened—that's in the Results section). Explain how the study was run, giving a chronological description of the experimental conditions to which subjects were exposed. If the experiment involved several treatment groups, mention the criteria for assignment to groups. If the instructions to subjects are manipulated (i.e., an independent variable), include verbatim instructions given to human subjects; these should be typed double-spaced in an indented block. If the wording of the instructions is not critical to the experiment, summarize. Remember that metric measures of length, weight and volume must be used, not the American system.

Results

The Results section describes with words, numbers, figures and tables the data collected and the statistical treatment of them. Major findings should always be reported first. As you describe each finding in the text, refer the reader to the appropriate table and/or figure that shows the findings in numerical or graphical form. Figures and Tables

are numbered consecutively and are placed after the Reference section at the end of your research report. Refer to figures and tables by number in the body of your report. The Results section appears immediately below the Method section with no page break between sections.

In a research report to be published, data are always analyzed statistically to determine if the independent variable(s) had a significant effect on the dependent measure(s).

Be sure to report the data in sufficient detail, but do not discuss the implications of the results—save this for the Discussion section. Avoid repeating the same data in several places and using Tables or Figures for data that can be easily presented in a few sentences in the text. Do not present the same data in both Tabular and Graphical form! Tables and figures only supplement the text. Always tell the reader what to look for in tables and figures and provide sufficient explanation to make them readily intelligible. Do not include individual scores or raw data (data that has **not** been summarized across subjects within a treatment group, or across trials for a single subject), with the exception of single-subject designs or illustrative samples.

Sometimes it is helpful to use a few subheadings in the Results section to clarify presentation of your findings. For example, in a study of the predictors of loneliness in a college student population, you may want to use the subheadings “Sex differences in reported loneliness” and “Personality variables related to loneliness.” These subheadings are entered like the subheadings to the Method section.

Tables. Tables are used to provide exact values and can efficiently illustrate main effects. The numerical data in the body of a table begin two spaces below the title. The title should identify the response measures (e.g. means, proportions, etc.) and the experimental conditions under which the measures were taken. Although tables are referred to in the Results section, they are actually inserted in the report after References. Below is an example of a Table.

Table 1

Unconditioned Responses (Mean and Standard Error) of Nondeprived, Dehydrated, and Deprived Pups to Oral Infusion of Milk during Training

	Activity	Mouthing	Probing
3 days			
Nondeprived	6.2 (.6)	1.2 (.2)	.5 (.1)
Dehydrated	8.4 (.8)	1.8 (.1)	1.6 (.2)
Deprived	9.9 (.4)	2.7 (.1)	2.1 (.2)
6 days			
Nondeprived	5.6 (.6)	1.2 (1.2)	.5 (.1)
Dehydrated	6.6 (.8)	1.7 (.1)	1.0 (.3)
Deprived	9.9 (.4)	2.7 (.2)	2.9 (.1)

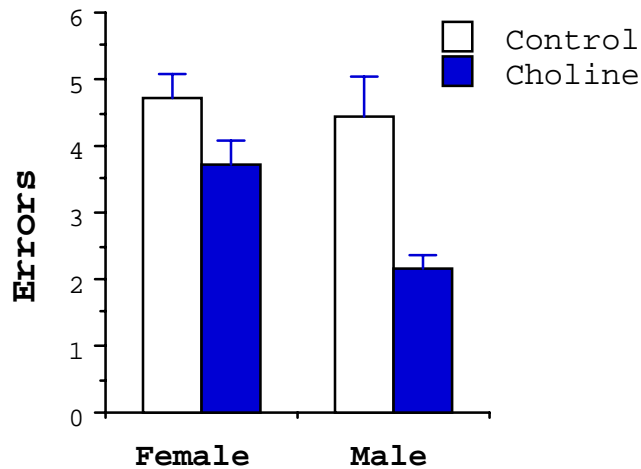
Figures and Figure Captions Page. Figures appear after the tables in your report. The term “figure” is applied to a variety of graphical representations which include diagrams of apparatus, cumulative response curves, bar graphs, psychophysical sensitivity curves, and the like. Figures are numbered in the order in which you refer to them in the text. Figure captions, which describe briefly the data being presented, appear on a separate page preceding the figures. The title “Figure Captions” is centered at the top of the page, and the captions begin two spaces below this. The figure caption page should look something like this:

Figure Captions

Figure 1. Mean number of errors made on a 12-arm radial maze by male and female control (striped bars) and prenatal choline-treated (filled bars) rats.

Figure 2. Degree of loneliness reported by 100 college students.

Figures showing experimental results should be constructed with the dependent variable along the ordinate, or y-axis, and the independent variable along the abscissa, or x-axis. The ratio of the lengths of the y-axis to the x-axis should be about 3:4. Scale markings should be located along each coordinate. Each axis should be clearly labeled and numbered. All figures should be prepared neatly. If more than one curve appears on the same set of axes, the curves may be distinguished by varying the design of the points (circles, triangles, squares, filled and unfilled). A legend should be included to tell the reader which curve is associated with which group, condition, or value of some other variable. Below is an example of a bar graph. These data are described as Figure 1 above. For more information on creating graphs, see Appendix B - Creating Graphs Using Excel



Discussion

The Discussion section states the conclusions that may be drawn from the results and relates them to the issues raised in the Introduction. **Be sure to focus the discussion on the major effect(s) found in the experiment.** However, all results mentioned in the Results section should be discussed here. If a hypothesis has been tested, what implications do the results hold for the theoretical background reviewed in the Introduction? Be sure to describe your results as they relate to the hypothesis you developed in the introduction section. Agreement or disagreement with previous findings and suggestions for further research (or for improving the present research)

may be mentioned but should not be the major focus of the discussion. Do not bash your data, but assume the results are real and interpret them as a reflection of your hypothesis.

Beware of a common flaw of Discussion sections: do not merely repeat the information of the Introduction or Results sections. Material presented here should be guided by the numerical data that were presented in the Results section but should offer an interpretation and draw a conclusion.

If unexpected results were obtained, you may want to describe characteristics of the experimental design or procedure that may account for the unusual findings. A discussion of unexpected results should be an occasion to propose further research to clarify the causes of surprise.

References

The Reference section begins on a new numbered page, with the title "References" centered at the top of the page. The APA reference style changed in 1984, and we will be following the updated style. If you look up older articles and books, the style will differ from the one you will be using in your lab reports.

Only include books or articles that you have cited in the text of your paper. Each journal article reference should include author's name, year of publication, title of article, journal name (underlined), volume number (underlined), and pages on which the article appears. Book entries contain author, title (underlined), publisher name and city, and year of publication.

References are alphabetized by authors' last names and initials. Book and journal titles are underlined—but not the article name. Only the first letter of the first word of book and article titles is capitalized. Journal titles should not be abbreviated. The first line of each entry begins at the left margin, and subsequent lines are indented five spaces.

Page numbers should be included for journal articles and for a chapter in an edited book, but not for a single authored textbook.

Format for a journal article:

Last name, first initial (year of publication). Article title. Journal Name, Volume, page #-page #.

Format for a book:

Last name, first initial (year of publication). Book title. City: Publisher.

Examples:

Adler, H.E. & Dalland, J.I. (1959). Special thresholds in the starling (*Sturnus vulgaris*). Journal of Comparative and Physiological Psychology, 52, 438-445.

Blough, D.S. (1943). A method for obtaining psychophysical thresholds for the pigeon. Journal of the Experimental Analysis of Behavior, 1, 31-43.

Gourevitch, G., Hack, M.H., & Hawkins, J.E. (1960). Auditory thresholds in the rat measured by an operant technique. Science, 131, 1046-1047.

Malsbury, C.W., & Pfaff, D.W. (1974). Neural and hormonal determinants of mating behavior in adult male rats: A review. In L.V. DiCara (Ed.), Limbic and autonomic nervous systems research (pp. 85-136). New York: Plenum Press.

Sidman, M. (1960). Tactics of scientific research. New York: Basic Books, Inc.

*Tables and Figures **

The Tables and Figures appear after the Reference section of a laboratory report. See section entitled Results for format and guidelines for typing figures and tables.

* * * *

Additional Elements of Style

Abbreviations, when used appropriately can help to simplify the presentation of material. They should contain as much information as possible, and be easily interpreted. The ideal abbreviation is one that is easily remembered even after a single reading. As an abbreviation for hippocampus, “HIP” is preferable to “H” or “HUS.” Each abbreviation should be explicitly defined in the appropriate portion of the text. Abbreviations for experimental groups can often save many words. “One group, HIP, received lesions of the hippocampus... The HIP group was “impaired.” That definition allows “HIP group” to be substituted for “rats with hippocampal lesion” or “the hippocampal lesion group.”

Animals can be many different kinds. Specificity is always to be preferred when it is appropriate. If rats were the subjects, use “rats” rather than “animals” because this term is more informative.

Average may mean three different mathematical terms: mean, median, or mode. Be specific and use the correct term.

Comparisons should always be of like elements. “Hippocampal lesions, unlike control rats, impaired performance” should be written as “Hippocampal lesions, unlike control lesions, impaired performance.”

Control data should always be presented first. The results of experimental manipulations can be evaluated only when they are compared to a baseline, or behavior that has not been manipulated.

Criterion performance is often incorrectly stated in an abbreviated form. A criterion of “8 out of 10 correct responses” is meaningless. Obviously, if 10 responses were correct, 8 of them must also have been correct. The correct statement is “a criterion of 8 correct responses in 10 consecutive trials.”

Dangling modifiers can often be amusing, and usually result from a failure to use direct language. “Bounding down the stairs, I saw the apples hit the bottom.” That hurts.

The word *data* is plural and takes a plural verb: “The data are,” not “The data is.” The rarely used singular of data is *datum*.

Found, observed, showed are almost always inappropriate. “Hippocampal lesions impaired discrimination” is preferable to “hippocampal lesions were found to impair discrimination.” Obviously, if you know this result, somebody found it. Unless you want to emphasize history about the process of findings, the result is important, not the process.

Issues are most important, previous experiments are subordinate. A good issue is worth examining even if no one has studied it before. A bad issue is not worth

examining even if many people have studied it before. Introductions should present issues first, previous experiments (if any) second.

Lead sentences in a paragraph can make the organization of the entire paper more clear. Placing the “bottom line” at the top provides the framework in which to understand the subsequent analysis.

Leading nouns in a sentence can organize ideas. A sentence should begin with the most important information. “Rats with hippocampal lesions were impaired in conditional discriminations” is a good construction if the results from rats are being compared to those from monkeys, but a bad construction if hippocampal lesions in rats are being compared to amygdala lesions in rats. Likewise, “hippocampal lesions in rats impaired conditional discriminations” is a good construction if the comparison is of hippocampal and amygdala lesions in rats, but a poor construction if the comparison is between hippocampal lesions in rats and hippocampal lesions in monkeys.

Only is often misplaced. Only I went to the store. I only went to the store. I went to the only store. Most often, only is placed too early in the sentence. Make certain it modifies the appropriate item.

Over primarily describes the physical position of an item with respect to another. “During ten days” or “for ten days” is preferable to “over ten days.”

Parallel construction is always to be preferred. If two phrases are discussing the same point and making a comparison, the form of the phrases should be identical. “Hippocampal lesions impair delayed conditional discriminations, while amygdala lesions impair crossmodal associations” is preferable to “hippocampal lesions impair delayed conditional discriminations, while downmodal associations are impaired by amygdala lesions.”

Pronouns are almost always inappropriate unless you are telling personal story. The fact that you are involved in the enterprise is not directly relevant to the scientific merit of the discussion.

Since refers primarily to the passage of time, and not logic. When logic is involved, the correct word is “because.” “Because hippocampal lesions impair memory, they should disrupt performance in this task” is preferable to “since hippocampal lesions...”