A very important element of research methods involves effectively communicating findings. In Psychology, we primarily communicate through writing, including journal articles, chapters, and books. The field has developed APA style as the specific format for writing. Although it may seem at times like nitpicky detail, by having a well-defined standard, there is consistency to the papers that we read and write. By writing in APA style, you demonstrate that you are a well-trained, knowledgeable scholar. You will be required to write in APA style for almost all of the written assignments in your MAPP courses, and especially for your capstone project.

The APA Manual (6th ed.) provides extensive details on the style itself and addresses other issues such as good writing, reducing bias, and ethics of responsible authorship. The information can seem overwhelming, and the last thing time-pressed individuals want to do is sort through the details. The information provided here is intended to point out key points of APA style and offer some examples (also see pp. 41-59 in the manual). Of course, this should not replace the manual. For each section, relevant page and section numbers from the manual are included in italics.

**APA Resources**


As our resources are increasingly available online, many citations and references now are accessed and read online. Having consistent criteria is especially important. I highly recommend the APA Style Guide to Electronic Resources (6th ed): [http://www.apastyle.org/products/4210512.aspx](http://www.apastyle.org/products/4210512.aspx) (Once you order, you can immediately download the PDF.)

Perhaps some of the best resources are now online. If you Google information on the web, you will be able to find answers to most of your APA questions. HOWEVER, the quality of websites varies, and so I'd recommend using the following two sites:

1. The APA style blog ([http://blog.apastyle.org](http://blog.apastyle.org)): This blog is produced by APA, provides all sorts of background and detailed information. It is constantly updated, so you can stay up to date. The APA organization has also responded to reader queries on Facebook ([http://www.facebook.com/APAStyle](http://www.facebook.com/APAStyle)) and Twitter ([http://twitter.com/APA_Style](http://twitter.com/APA_Style))

2. OWL: The Purdue Online Writing Lab ([http://owl.english.purdue.edu/owl/section/2/10/](http://owl.english.purdue.edu/owl/section/2/10/)): This is hands down the best online APA resource I have found (and often if you do a Google search, it will lead you to this site). The site offers both background information and numerous detailed guidelines and examples.

Additional Web-based applications and resources:

3. **Son of Citation Machine** web application ([http://citationmachine.net/index2.php?reqstyleid=2&newstyle=2&stylebox=2](http://citationmachine.net/index2.php?reqstyleid=2&newstyle=2&stylebox=2)): I haven’t used this, but it looks like you can enter the information, and it generates the citation.

5. **Auto-generation** through PsycInfo, Web of Science, Refworks, EndNote, or similar reference program. Most of the reference type programs now have options to automatically format your references into APA style. On PsycInfo and Web of Science, after you mark records, under save, you can generate an APA style bibliography, to download, print, or copy into your document (save as RTF, and it opens as a Word document). For Refworks, see the guide provided at the on-site.

*It’s still important to check what it creates – in general these are correct (and getting better over time), but I have still seen some errors.*

**What’s New in APA 6?**

Every so often, the APA manual is updated. The core information is carried over, but some aspects are modified – this is the continued refining of language and writing. As some of you may already have experience with prior versions of the APA manual, here are the key things to note about changes from APA 5 to APA 6. A summary of changes can be found here: [http://www.apastyle.org/manual/whats-new.aspx](http://www.apastyle.org/manual/whats-new.aspx). A few of the most relevant changes are as follows:

- Perhaps the biggest change is that the book incorporates advances in technology, with much greater emphasis and resources available for electronic resources. They have expanded on-line resources (see section above – APA used to be very secretive about what they included online, but now make much available, especially through the blog). There are new guidelines on what to do about resources with no page numbers, and the increased use of digital object identifiers (doi – see detailed description below).

- The book was reorganized to streamline use. Once you get used to the manual, it is easy to find what you need. It begins with background on ethical issues, then structure and content of manuscripts with examples, tables and graphics, citations and references, and finally details on working through the publication process. Alternatively, the Concise Rules book will point you to most of the key point you need.

- They broadened references and examples to readers across the behavioral and social sciences (not only psychology).

- For manuscript structure and content, sections have been added on meta-analyses, supplemental material, and a flow chart of how participants move through experiments.

- New guidelines on reducing bias in language, include the use of “subjects” vs. “participants” (either is fully accepted), gender (gender is cultural, sex is biological; be careful of how you use feminine and masculine pronouns), sexual orientation (new definitions and guidelines included), race (avoid language that reifies race, avoid use of “minority” for “non-White”), and more.

- For punctuation, the 6th edition returned to two spaces after the period of sentences. However, in practice, some researchers use one space and others use two. The key is to be consistent.

- Updates on when to use numerals versus words.

- New guidelines for reporting $p$ values – these should be reported to two or three decimal places, unless values are less than $p < .001$ (before it was acceptable to indicate $p > .10, p < .05, p < .01$, but now exact $p$ values should be reported).

- Include effect sizes and confidence intervals whenever possible.

- Table and figure sections have been revised, with very applicable examples across a broad range that should cover the types you might create in MAPP. Tables can be single or double-spaced (previously, all had to be double-spaced. Now it is preferred to make the table readable – if it fits
on the page better single spaced, then do that. The notes below the table are typically smaller font and single-spaced. Also, note that for figures, the caption goes below the figure (on the same page; previously there was a single page with figure captions, and then the figures following).

**Formatting** (see pp. 228-230, section 8.03)

- **Margins:** One inch on all sides (top, bottom, left, right). I would suggest changing the default in your normal Word template (their default is typically 1.25”)

- **Paragraph Indentation:** 5-7 spaces (1/2 inch – use the tab key)

- **Alignment:** Left justified with uneven right margin

- **Font Size and Type:** 12-pt. serif font. Times New Roman or a similar font is preferred. (Note that a smaller size can be used in the tables or figures, but it should still be readable.)

- **Spacing:** Double-space throughout the paper, including the title page, abstract, body of the document, footnotes, and references. Tables can be single or double spaced (double spaced if it will fit on the page; single space can be used if keeping things on a single page aids comprehension). Note that additional spacing before and after a paragraph is unnecessary (i.e., the default on Word is often a 6 or 10 point spacing after a paragraph (under the paragraph option menu). Change the default to 0)

- **Pagination:** Page numbers appear in the header of each page (first line) on the right hand side, beginning with the title page. Use the header function in Word.

- **Headings:** All topics of equal importance have the same level of heading throughout the manuscript. Three levels of headings should suffice for most papers. Use double-spacing within the headings. Note there are 5 levels of headings and their use varies by the number of topics being outlined (3 levels is most typical). Headings are formatted as follows: (pp. 62-63, section 3.03)

  **First Level Centered, Upper and Lower Case**
  Paragraph text begins on the next line, with the usual tab indent.

  **Second Level Flushed Left, Upper and Lower Case**
  Text begins on the next line.

  **Third level, indented, upper and lower case.** End with a period and start the text

  **Fourth level, indented, upper and lower case.** Again, start the text after the header

  **Fifth level, no bold italicized.** You will rarely go down this many levels.

**Writing Style**
Chapter 3 includes advice on writing style, including topics such as reducing bias, how to use verbs and nouns, and other tips for clear and concise writing. This is helpful to check out, as there is an amazing difference between a well-written and a poorly-written paper.

**Elements of Style:**
Chapter 4 includes details on punctuation use (periods, commas, semicolons, quotation marks, etc.). This can be good to go over, as this guides writing and keeps things uniform. A few key points:
• **Sentence spacing:** The fifth edition of the APA Manual required 1 space between sentences. The 6th edition requires 2 spaces. In practice, either is accepted – just be consistent throughout the manuscript. (*pp. 87-88, section 4.01*)

• **Abbreviations:** Try to limit the use of abbreviations, as this can cloud understanding. However, if you will use the same term throughout, spell it out completely, and then include the abbreviation you will use in parentheses. For example, “Mood was measured using the Positive and Negative Affect Scale (PANAS).” With only a few exceptions (e.g., IQ, HIV, AIDS, ACTH), every abbreviation should be spelled out the first time it is used. (*pp. 106-111, section 4.22-4.30*)

• **Numbers:** typically, numbers under 10 should be spelled out (one, two, three…), and numerals should be used for numbers 10 or more (32, 57…). If a sentence begins with a number, write it out. (*pp. 111-112, section 4.31-4.32*)

• **Decimals:** for values under 1 (e.g., r = .53), do not include a 0 before the period. These are usually carried to two decimal points, unless there is a specific reason to use hundredths or thousandths (depends on your measure). (*pp. 113-114, section 4.35*)

**Paper Set-Up:**

• **Title Page:** Most manuscripts include a title page with specific formatting. This gives a uniform look to the manuscript. Also, when a manuscript is reviewed, this page is often removed, so that the reviewers do not know who write it (this could bias the reviewer – positively or negatively, making acceptance or criticism based on status, rather than on the science and quality of the manuscript). A sample title page is included at the end of this document. The title page includes:
  o **Title:** A clear, concise, yet descriptive summary of the main ideas of the manuscript. Aim for 12 words or less. Center this on the page, a few lines down from the top (*p. 23, section 2.01*)
  o **Author names and affiliations:** Names are usually first name, middle initial, and last name. Omit degrees and titles. The affiliation indicates where the author was when work on the manuscript was conducted. These should be centered below the title (*p. 23-24, section 2.01*).
  o **Author note:** This includes more information on the authors, acknowledges funding by grants or support by others (who do not deserve authorship status), and contact info (*See manual for details pp. 24-25, section 2.03*). This should be left aligned at the bottom of the title page
  o **Header:** Starting on the first page and running throughout the manuscript, you will include a header. Use the header option in Word. Aligned left, include the words “Running head: SHORT TITLE”, and then align the page number (use automatic numbering) to the left. The running head is a short title (less than 50 characters including punctuation and spaces) that identifies your document, which is helpful if the pages were to be separated (see example below).

• **Abstract:** The abstract is a self-contained summary of the most important elements of the paper (*the important elements depend on the type of paper – see pp. 26-27, section 2.04, for details*). This is perhaps the most important part of the paper – many times this is all that people will read. It should be accurate, coherent, readable, concise, and non-evaluative. The length depends on the journal, but typically should be 250 words or less. The abstract begins on the page after the title page. Type the word “Abstract”, centered on the top, then include the abstract left aligned, no indent. Follow the abstract with the word “Keywords”, and include 4-5 key words that describe the manuscript. An example is included at the end of this document.
• **Body:** The body of the paper begins on a new page after the abstract (subsections listed below should be continuous - do not begin each on a new page).
  
  o **Introduction:** The title of the paper, using uppercase and lowercase letters, is centered on the first line. This will serve as the intro’s heading (do not include a heading “introduction”). The introduction begins on the line following the paper title (see example at the end of this document). The introduction should introduce the problem, review relevant literature, give an overview of the present study, and include any hypotheses (*pp. 25-26, section 2.05*)
  
  o **Method:** Describes in detail how the study was done. This will include empirical research subheadings (e.g., participants, measures, procedure, data analyses) (*pp. 27-32, section 2.06*).
  
  o **Results:** Summarizes what the study found, by following the procedure and data analyses described in the method. This often includes tables and figures. Meaningful numbers should be included (not simply every analysis you ran). All relevant results should be included, even if they disconfirm your hypotheses. Enough information should be included to justify your conclusions. (*pp. 32-35, section 2.07*).
  
  o **Discussion:** Analyzes and interprets the findings, especially in light of your hypotheses. Discusses validity, generalizability of findings, limits of the study, and future direction (*pp. 35-36, section 2.08*).

• **References:** This section begins on a new page with References beginning on the line following the heading (see example at the end of this document). Details on citations follow.

• **Footnotes:** Footnotes provide additional information or acknowledge permission for copyrights. Limit the use of footnotes as much as possible. If included, they can be included either on the bottom of the page where they occur (using the footnote function in Word), or on a separate page after the references (*pp. 37-38, section 2.12*).

• **Tables and Figures:** Often, results are presented in tables or graphically with figures. These should accentuate your discussion. See the detailed discussion of these in the manual (*Chapter 5*)

**In-Text Citations**

Chapter 6 offers a good discussion about crediting sources. Citing references – providing the sources of your research and writing – is very important. It is a form of professional honesty and courtesy to others, demonstrates that you have considered existing ideas and research, and informs readers where to go for additional information. Accuracy is essential. Most cases of plagiarism are unintentional, but can lead to a lot of problems.

Obviously, if you directly quote from a previously published work, cite it directly (including the page number). Short quotes (fewer than 40 words) should be incorporated in the text, enclosed by double quotation marks. For 40 or more words, use block notation (*see p. 171, section 6.03*). Note that you should try to avoid lengthy quotation as much as possible. Often, you will need to obtain permission to use direct quotes, especially if it is longer section.

Remember that the idea is to present your own work, not simply parrot what someone else wrote. Paraphrase ideas rather than directly quote as much as possible. If you refer to another work, whether paraphrasing what was written or the ideas, cite your source. *Pages 174-179 (section 6.11-6.20)* detail the format of citations. If you refer to an author directly, follow the name with the year. If there are two or three authors, write out “and”. For example:

In a group of eight grade students, Duckworth and Seligman (2008) found that high school achievement was affected more by self-discipline than IQ.
If there are more than three authors, it is often good to use “colleagues” or “et al.”:

Based on the temporal pattern, Metcalf and colleagues (2010) concluded that fatness leads to inactivity as opposed to inactivity leading to obesity.

The problem with these types of citations is that it focuses the writing on the specific author(s), rather than on the findings of the study itself. Try to summarize or discuss studies or ideas and then cite the study at the end of the sentence. To improve readability, include the citation(s) at the end of a sentence or paragraph, rather than citing every few words. The exception is that if a specific term or idea should be credited to a specific course, then cite directly after the paraphrased phrase. To cite, include the author(s) name(s) and year of publication (and the page number if it is a direct quote). Some specific details and examples (these are in-text citation examples; see reference section below for reference format):

- If there is more than one author, use the “&” symbol. (Kern & Friedman, 2008)
- If you use a citation multiple times, things get trickier.
  - For 2 authors, always cite both authors each time
  - For 3 to 5 authors, cite all authors the first time. Then in subsequent citations, cite the first author and then “et al.” For example:
    First citation: (Hampson, Goldberg, Vogt, & Dubanosky, 2006)
    Subsequent citations: (Hampson et al., 2006)
  - For 6 or more authors, only cite the first author’s name and use “et al.”
    (Metcalf et al., 2010)
  - For a direct quote, if there is one page, type “p. ##”. For multiple pages, type “pp. ##-##”
    (Park & Peterson, 2009, p. 425)
    (Park & Peterson, 2009, pp. 423-424)
  - For direct quotes from an online source (such as an electronic Kindle book), there are often no page numbers listed. This gets trickier. If paragraph numbers are visible, type “para. ##”. If there are headers but no paragraph numbers, then type the header and the paragraph number (count down). If you are quoting from a book, you might want to include the chapter number (type “Chapter ##” – spell out chapter). The key is to point the reader directly to your citation. (see section 6.05, pp. 171-172)
    (Seligman, 2002, para. 29)
    (Seligman, 2002, Chapter 4, “Dwelling in the past”, para. 3)

It is important that your citations match your references. Every citation should be detailed in the reference section (see below). (Note: an exception is for personal correspondence or other unpublished work. These are cited only in the text and are not included in the reference section. See p. 179, section 6.20)

References

The manual includes a lot of details about references (see pp. 180-224, sections 6.22-A7.07). Obviously this is a lot of information! The details are obtained from your source (this can be tricky with some electronic resources – the APA manual now includes detailed information and examples on this).

In general, references should contain four elements: the author’s name, date of publication, title of the work, and source data (who, when, what, and where). These are always in the same order, and everything is simply a variation off of this:

Author, A. A. (year). Title. Source.
The idea is to provide the information needed for others to locate your source. Most of this can be broken down into a few simple elements. Let the APA manual (or this document and the other resources noted above, with preference given to the books and websites by APA) be your guide; find the reference example most similar to your source and follow the example. If a source is missing part, include the information that you can. A few notes to keep in mind:

- Entries use a hanging indent (i.e., first line aligned to the left of the page, subsequent lines indented ½”. In your formatting, make use of Word’s tab functions (i.e., use the ruler at the top of the document), rather than manually pressing enter at the end of each line and tabbing subsequent lines.
- Entries are organized alphabetically by the last names of first authors (then by first name, if there are multiple authors with the same last name but different first names). If there are multiple citations by the same author, then alphabetize by the second author, then the third author, etc. A single name comes before multiple names.
- If there are multiple articles by the same author(s), order by date, going from earliest to latest.
- Authors are listed in the exact order as specified in the source, using the full last name and initials for any other names.
- Use commas to separate all authors (even if there are only two).
- The main elements are separated by periods (after the author(s) name(s), the year, the title of the article or book, journal info (if applicable), and publisher (for books). End the entire citation with a period (except after a website – see below).

**Basic entries** (for the styles you most likely will use the most):

**Journal articles:**

Author Last Name, First initial. Middle initial., & Second Author Last Name, First initial. Middle initial. (year). Title of article. *Title of Journal Source, Vol*(Issue), page numbers.


**Entire book**

Author Last Name, First initial. (year). *Title of Book (## ed.).* Publisher location: Publisher.


**Chapter in an edited book**

Author Last Name, First initial. Middle initial. (year). Title of chapter. In First initial of editor. Middle initial of editor. Last name of editor (Ed.), *Title of book* (pp. ##-##). Publisher location: Publisher.

Electronic sources: journal articles, websites, and electronic books

- When using online journal articles, try to cite the most recent version. When you search (especially on Google), you might find a draft, in press, or advanced print (online first) version. When you are finalizing your manuscript or paper, double check for updates.

- For electronic resources that are not journal articles, then typically additional notation is needed, which is given in brackets to indicate nonroutine information. Choose wording that is brief, accurate, and descriptive of the source. For example:

<table>
<thead>
<tr>
<th>Lecture notes</th>
<th>Blog post</th>
<th>Mobile application software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tweet or Twitter update</td>
<td>Podcast transcript</td>
<td>PowerPoint presentation</td>
</tr>
<tr>
<td>Press release</td>
<td>White paper</td>
<td>Report No. ###</td>
</tr>
</tbody>
</table>

- The 6th edition stresses the use of a digital object identifier (DOI). This is a new addition for electronic sources, and so is not yet commonly included in reference sections, but should be included if available. The DOI is a permanent online address so others can locate the article in the future (see p. 198). This tends to be a long, weird number, so it is good to copy this directly from the article or your search engine. The last page of this document includes a flowchart to help determine when to include DOI, URL, or other database information, based on your source (Lee, 2009). There are some good examples in the Manual (pp. 198-215), and especially in the APA Electronic Guide; check these out for specific examples and formats.

  - The question becomes how to find the DOI. Search sites such as PsycInfo include this number in the source information – you can copy this directly. Alternatively, Crossref is a free website that will let you look up the DOI (http://www.crossref.org/guestquery/)

- If there is a DOI, then the citation is:

  Author Last Name, First initial. Middle initial. (year). Title of article. *Title of Journal Source, Vol.* page numbers. doi:xx.xxxxx

- If there is no DOI, then include the URL for the website where you obtained the source from (note: do not include a period at the end of the website):


- Many articles or websites will not include all of these elements (e.g., missing author, or journal title). Include as much information as you can find – the goal is to help people find it in the future. If there is no author, put either the cite host, title of the author, or some other indicator in the author spot. For example:


In-class lectures

I’ve had a lot of questions about class lectures in the past. These are usually treated as a form of personal communication (see p. 179), cited in-text as:

  Research methods are fun (A. L. Duckworth, MAPP class lecture, September 5, 2012).

This is not included in the reference section, only cited in the text. However, this is the basic structure for class lectures that are not recoverable (i.e., the person presented in class, and you are drawing on your memory or notes, not PowerPoint slides or a recording). If, however, the information is recoverable (e.g.,
the lecture is recorded and available online, or the person posts their slides), then it should be referenced as archival material. So the text citation would be:

A benefit of using questionnaires are that they are cheap and easy to use (Duckworth, 2012).

And the reference would be:

Author, A. A. (year). *Title of presentation* [Lecture notes or PowerPoint slide]. Retrieved from http://XXX


A few additional reference examples:

<table>
<thead>
<tr>
<th>Reference Example</th>
<th>Type of Citation</th>
</tr>
</thead>
</table>
The information above was adapted from the following websites and the APA Manual (6th edition).


The following pages include some examples for formatting the title page, abstract, paper, and references. Also see http://www.apastyle.org/learn/faqs/index.aspx for FAQs APA style.
Title of Manuscript

Author Name

Author Affiliation

Author Note

Margaret L. Kern, Department of Psychology, University of Pennsylvania.

This research was supported by grant XXXXX from the National Institute on Aging.

Correspondence concerning this article should be addressed to Margaret L. Kern,
Department of Psychology, University of Pennsylvania, 3701 Market Street, Philadelphia, PA 19104. Email: mkern@sas.upenn.edu
Abstract

Type the abstract, left aligned with no indent. The abstract is a self-contained summary of the most important elements of the paper (this depends on the type of paper – see pp. 26-27 for details). This is perhaps the most important element of the paper – many times this is all that people will read. It should be accurate, coherent, readable, concise, and non-evaluative. The length depends on the journal, but typically should be 250 words or less.

Keywords: include 4-5 key words that describe the manuscript (search engines use these)
Integrating Prospective Longitudinal Data:

The Terman Life Cycle and Hawaii Cohort Studies

Start writing introduction of paper. Indent 5-7 spaces (1/2) inch. Text should be left aligned and double spaced throughout. Set up your arguments, review literature, and outline your hypotheses.

**Method**

Continue on with the method, results, discussion, etc.
References


Appendix 1: DOI and URL Flowchart
A decision chart for deciding when to include electronic information

DOI and URL Flowchart

Q: What do I need to know about DOIs? When do I use them?
A: A DOI is a unique alphanumeric string that provides a persistent link to content online. Try to include a DOI for every reference. DOIs are actually quite prevalent—publishers who use them assign one to all their online content, even if it was published pre-internet.

CrossRef makes DOIs easy to find. The free DOI lookup finds DOIs one at a time. Or if you cut and paste your reference into the Simple Text Query form, CrossRef will find all the available DOIs at once. For online material without DOIs, include URLs or database names/URLs as described in the flowchart.

Q: If I used a database and there is no DOI, why can’t I just include the database information all the time?
A: Try to get your readers to the material in a universally accessible, simple, and direct way. Many databases are subscription-based or university specific and thus not accessible to everyone. Their content can also change over time. Although publisher homepages may also change (which is why DOIs are preferred), they are accessible to everyone and easy to find online.

If you are unsure how to cite a reference you found in a database, try finding a homepage URL first. Include database information only if your material is not easily located elsewhere (e.g., dissertations, monographs, or informally published papers), which may be available only through databases such as ERIC, JSTOR, or ProQuest Dissertations & Theses Database.

© 2009 American Psychological Association