Lecture Notes

# Chapter 21: How to Prepare a Research Report and Use APA Style Guidelines

## Learning Objectives

* 1. Explain the different principles used in writing an APA-style research report (e.g., language, specificity, labels, etc.).
  2. Describe the five levels of APA headings.
  3. List the seven sections of an APA-style quantitative research report and describe what goes in each section.
  4. Explain how one might use the example of an APA-style manuscript provided in the chapter.
  5. Explain how to write a qualitative research report.
  6. Explain how to write a mixed methods research report, especially the Results section.

## Chapter Summary

The purpose of this final chapter is to provide useful advice on how to organize and write a research paper that has the potential for publication. The chapter focuses on how to write research reports in APA style as well as specifics related to writing reports of quantitative, qualitative, and mixed research.

## Annotated Chapter Outline

1. Introduction
   1. Before preparing the research report, critically review it and see whether it is free from flaws and whether others would be interested in learning about the study.
   2. This chapter focuses on general principles for writing about research studies for dissemination. It also differentiates between writing about quantitative, qualitative, and mixed research.
      1. Table 21.1 contains a listing of some of the journals that publish educational research studies.
      2. Most educational research journals require that authors follow the style specifications included in the *Publication Manual of the American Psychological Association* (American Psychological Association, 2010).
2. General Principles Related to Writing the Research Report (I): the research report must be prepared so that it communicates clearly to readers. See Burke’s Writing Tips in the student companion website.
   1. Clear communication requires:
      1. Orderly presentation of ideas
      2. Continuity of words, concepts, and thematic development throughout manuscript.
         1. Objectivity may be lost, put it aside for a short period of time.
      3. Smoothness and economy of expression: avoid ambiguity, shifting topics, tense, or person.
      4. Eliminate redundancy, wordiness, jargon, evasiveness, overuse of passive voice, circumlocution, and clumsy prose or too much detail.
      5. Discussion Question: Summarize the major tenets of APA style for writing research papers.
   2. Language (I.1): should be free from demeaning attitudes and biased assumptions. Accomplished in three ways.
      1. Specificity (I.1A)
         1. Choose accurate and clear words that are free from bias.
         2. One way to do this is to be very specific rather than less specific.
         3. Include any relevant data.
      2. Labels (I.1B)
         1. Avoid labeling people whenever possible.
         2. Respect participants
         3. Called what they prefer to be called.
         4. Use person first language: “Children with a diagnosis of . . . ”
         5. Do not hold one group as the standard against another is to be judged.
      3. Participation (I.1C)
         1. “Participants or subjects”
         2. Be specific when describing participants
         3. Acknowledge participation.
         4. Sex and Gender:
            1. Avoid sexist language by using male and female pronouns or using more generic forms like” people, individuals, and so on.
            2. Sex assigned at birth (male of female)
            3. Ask participants to self-identify
            4. Which best describes your gender identity?
3. Female/Woman
4. Male/Man
5. Transgender Female/Transgender Woman
6. Transgender Male/Transgender Man
7. Another gender identity (please specify)
   * + 1. Sexual Orientation not sexual preference
          1. Terms such as *homosexual* should be replaced with terms such as *lesbians*, *gay men*, and *bisexual women or men*.
8. In general, avoid loaded or stereotypic terms that denigrate people.
   * + 1. Racial and Ethnic Identity
          1. Specificity
          2. Sensitivity
          3. Preferred designations.
       2. Disabilities: Do not to equate people with their disability. For example, refer to a participant as a *student who has a learning disability* rather than as a learning-disabled student.
       3. Age--acceptable terms are *boy* and *girl*, *young man* and *young woman*, *male adolescent* and *female adolescent*. *Older adults* is preferred to *elderly*. Call people 18 and older *men and women*. Avoid labeling people whenever possible.
       4. Discussion Question: Describe how researchers will have to be careful about their writing when using APA style.
   1. Editorial Style (I.2): rules or guidelines used to ensure clear, consistent presentation of published material.
      1. Punctuation (I.2A)
         1. Space twice after the end of a sentence.
         2. Always include a comma before the and in a series (e.g., apples, oranges, and pears).
         3. Commas and periods are included inside the quote marks (e.g., Popular terms in high school are “geeks,” “dorks,” and “jocks.”).
         4. Separate two independent clauses with a semicolon, not a comma.
         5. Precede a colon with an independent clause. An independent clause is a set of words that could stand alone as a sentence.
      2. Italics (I.2B)
         1. Use sparingly.
         2. Used for titles of books, journals, introduction of new technical terms, statistical symbols, words that might be misread.
         3. Do not use for foreign words or Greek letters.
      3. Abbreviations (I.2C)
         1. Use sparingly.
         2. Use them only when they are likely to be familiar to the reader (such as IQ, e.g., cf., i.e., etc.) or will save considerable space and avoid cumbersome repetition.
         3. Not italicized or underlined.
      4. Headings: (I.2D)

|  |  |
| --- | --- |
| Level of Heading | Format of Heading |
| 1 | **Centered, Boldface, Uppercase and Lowercase Heading** |
| 2 | **Flush Left, Boldface, Uppercase and Lowercase Heading** |
| 3 | **Indented, boldface, lowercase paragraph heading with a period.** |
| 4 | ***Indented, boldface, italicized, lowercase paragraph heading with a period.*** |
| 5 | *Indented, italicized, lowercase paragraph heading with a period.* |

* + - 1. Not all headings are used in every manuscript

|  |  |
| --- | --- |
| Level of Heading | Format of Heading |
| Two levels of heading would appear as follows: | **Method**  **Selection of Research Participants** |
| Three levels of heading would appear as follows: | **Experiment 1**  **Method**  **Selection of research participants.** |
| Four levels of headings would appear as follows: | **Experiment 1**  **Method**  **Selection of research participants.**  ***Experimental and control participants.*** |
| Five levels of headings would appear as follows: | **Experiment 1**  **Method**  **Selection of research participants.**  ***Experimental and control participants.***  *Strategies used with participants.* |

* + 1. Quotations (I.2E)
       1. Quotations of fewer than 40 words are inserted into the text and enclosed in double quotation marks.
       2. Quotations of 40 or more words are displayed in a freestanding block of lines without quotation marks but indented about a half inch.
       3. The author, year, and specific page from which the quote is taken should always be included.
    2. Numbers (I2.F)
       1. Use words for numbers that begin a sentence and for numbers that are below 10.
       2. See the APA Publication Manual for exceptions to this rule.
       3. Use Arabic numerals (1, 2, 3)
    3. Physical Measurements (I.2G)
       1. In metric units or metric equivalent in parentheses
    4. Presentation of Statistical Results (I2H)
       1. For inferential statistics provide information to allow the reader to understand fully the analysis that was conducted.
       2. When reporting statistical tests provide test statistic value, degrees of freedom, probability value, and effect size indicator or effect size confidence interval.
    5. Reference Citations in Text (I.2I):
       1. When you cite work of others in the text of the research report, you must give them credit by referencing the work you have used.
       2. APA format is an author-date citation method.
          1. “Smith (2009) found that . . . ”
          2. “It has been demonstrated (Smith, 2009) . . . ”
       3. Multiple citations involving the same author are arranged in chronological order.
       4. Multiple citations involving different authors are arranged alphabetically.
       5. If a citation has more than two but fewer than six authors, all authors are cited the first time the reference is used. Subsequent citations include the surname of the first author followed by *et al.* and the year the article was published.
          1. Smith et al. (2008)
       6. If six or more authors are associated with a citation, only the surname of the first author followed by *et al.* is used for all citations.
    6. Discussion Question: Ask students to summarize the specifics of APA editorial style.
  1. Reference List (I.3)
     1. All citations in the text must appear in the reference list.
     2. Each entry should contain the author’(s), name(s), year of publication, title, publishing date, and any other information necessary to identify the reference.
     3. Separate page with *References* centered at the top of the page in uppercase and lowercase letters.
     4. Arranged in alphabetical order by first author’s last name.
     5. Use the same elements where reference an electronic source but include retrieval information: “Retrieved from . . . ”
     6. Discussion Question: What are the purposes of a reference list in a research report?
  2. Typing (I.4)
     1. Double-space all material in a uniform typeface.
     2. Times New Roman 12-point is preferred.
     3. One-inch margins at top, bottom, left, and right of each page.
     4. Use word processing bold or italics functions.
     5. Other special fonts or styles of type as specified in the APA Publication Manual.
     6. Discussion Question: What does APA specify in terms of typing manuscripts?

1. Writing an APA-Style Quantitative Research Report (II): There are seven major sections to the research report. Proposal is written in future tense. Research report is used in past tense. Results and Discussion sections are not included in the proposal.
   1. Title Page(II.1)
      1. Contents include a running head, title, author(s), and institutional affiliation(s) of the author(s), and author note.
      2. Running head is a shortened version of the title that is typed flush left in all uppercase letters on all pages.
      3. Title is centered (horizontally) on page and typed in uppercase and lowercase letters and should summarize the main topic of research and concisely identify variables or theoretical issues. Should be about 12 words long.
      4. Names of authors who have made a substantial contribution to the study appear below the title in upper- and lowercase letters. First name, middle initial, and last name but no titles or degrees.
      5. Institutional affiliation where the authors conducted the study is centered under the author(s) name.
      6. “Author Note” is centered and placed below the institutional affiliations. This provides information about each author’s departmental affiliations and any acknowledgements, disclaimers, or conflicts of interest and how to contact the author.
         1. There is a separate paragraph for each bit of information: First paragraph is departmental affiliation for all authors; the second identifies any changes in affiliations since the study completion; the third is acknowledgements of financial support, assistance, or special circumstances; and the fourth is the mailing and e-mail address of a contact person.
         2. If not all paragraphs apply, they are not included.
   2. Abstract (II.2)
      1. A comprehensive summary typically ranging from 150 to 250 words. For a manuscript submitted for review, it is typed on a separate page.
      2. The abstract should include a brief statement of:
         1. Research problem
         2. Participants
         3. Method used
         4. Key result(s) including significance levels, effect size, and confidence intervals.
         5. Major conclusion and applications or implications.
      3. Discussion Question: What information must be included in the abstract of a quantitative research study? Why are these components included?
   3. Introduction (II.3)
      1. This section is not labeled with a heading. It is assumed that the reader knows that the first section is the introduction.
      2. It should present the research problem and place it in the context of other research literature in the area and identify any hypotheses to be tested.
      3. It includes the “literature review.”
      4. Discussion Question: Discuss the components that are included in the introduction section of a quantitative research report.
   4. Method (II.4)
      1. This section does not start on a separate page in a manuscript being submitted for review.
         1. This section does not start on a separate page in a manuscript being submitted for review.
         2. Follows the introduction.
         3. Describes how study was conducted.
         4. Allows others to evaluate study design and reliability and validity of findings.
      2. The most common subsections of Method are:
         1. Participants (II.4A): list the number of participants, their characteristics, and how they were selected, and inclusion and exclusion criteria.
            1. Design if a complex design is used (otherwise the design is explained in the procedure section).
         2. Apparatus or Instruments (II4B) list materials used, why they were used, and the psychometric properties of the instruments.
         3. Procedure (II.4 C) provides a step-by-step account of what the researcher and participants did during the study so that someone could replicate it. Include instructions, stimulus conditions, responses made, and control techniques used.
      3. Discussion Question: What is the purpose of the Method section of an APA-style quantities research report?
   5. Results (II.5)
      1. This does not start on a separate page in your manuscript.
      2. It is where you report the results of your data analysis and statistical significance testing.
      3. Be sure to report the significance level that you are using (e.g., “An alpha level of .05 was used in this study”) and report your observed effect sizes and/or confidence intervals along with the tests of statistical significance.
      4. Tables and figures are expensive but can be used when they effectively illustrate your ideas.
      5. Organizing your results section by research question can be effective.
      6. Discussion Question: Compare and contrast the different approaches to writing the Results section.
   6. Discussion (II.6)
      1. This is where you interpret and evaluate your results presented in the previous section.
      2. Be sure to state whether your hypotheses were or were not supported.
      3. Also, answer the following questions:

a. What does the study contribute?

b. How do the results relate to prior research?

c. How has it helped solve the study problem?

d. What conclusion and theoretical implications can be drawn from the study?

e. What are the limitations of the study?

f. What are some suggestions for future research in this area?

* + 1. Discussion Question: Summarize the information that has to be included in the Discussion section of a quantitative research report.
  1. References (II.7): list of all citations in the text of the research report
     1. Center the word References at the top of a new page and double-space all entries.
     2. Use a hanging indent: the first line of each reference is flush left and subsequent lines are indented.
  2. Footnotes (II.8): numbered consecutively with a superscript Arabic numeral in the order in which they appear in the text of the report.
     1. Most are content footnotes, supplementing information in the text.
     2. Can be placed on same page as the referent is discussed or in consecutive order on a separate page after the references.
  3. Tables (II.9): only used when they can convey and summarize data more economically and clearly than a large discussion.
     1. Refer to tables by name in the text and explain what is contained in the table.
     2. Each table has a brief title explaining the data it contains. The title and word “Table” and its number are typed flush left with left margin at the top of the table.
     3. Each row and column have a label identifying the data contained in the row or column.
     4. Examples of different types of tables are in *APA Publication Manual.*
     5. Checklist for tables
        1. Is the table necessary?
        2. Should the table be presented in a print version, or can it be placed in an online supplemental file?
        3. Is there consistency between tables that present comparable data?
        4. Is the title brief, and does it indicate the table’s contents?
        5. Does a column heading exist for each column?
        6. Are all abbreviations, special italics, dashes, boldface, and special symbols explained?
        7. Do notes have the appropriate order of (a) general note, (b) special note, (c) probability note?
        8. Have all vertical lines between columns been eliminated?
        9. Do all tables use the same confidence levels, and do all major point estimates have confidence intervals?
        10. Have the correct probability levels been identified for the statistical significance tests conducted?
        11. Has full credit been given to the reproduction of a copyrighted table, and has permission to reproduce the table been obtained?
        12. Is there a reference to the table in the text?
  4. Figures (II.10): illustration such as a chart, graph, or drawing. Provide less precise information than tables. Only used when they augment the text and can present information in a way that is clear and easy to understand.
     1. Figure Captions and Legends (II.10A): caption explains the figure contents and serves as the figure title. It is placed before the figure. Figure legend explains any symbols used in the figure. It is placed within the figure.
     2. Figure Preparation (II.10B): Should be computer generated with good resolution. Checklist for preparation:
        1. Is the figure necessary?
        2. Has the figure been presented in a clear and simple format with no extraneous detail?
        3. Does the title describe the contents?
        4. Have all parts of the figure been labeled clearly?
        5. Is there a reference to all figures in the manuscript?
        6. Is the resolution high enough to permit accurate reproduction?
  5. Discussion Question: Describe the APA regulations for references, footnotes, tables, and figures.

1. Example of an APA-Style Manuscript
2. Writing Qualitative Research Reports
   1. We recommend that qualitative researchers also follow the guidelines given for quantitative research reports when writing manuscripts for publication, although more creativity within those sections is fine.
   2. Title Page and Abstract. The goals are exactly the same as before. You should provide a clear and descriptive title. The abstract should describe the key focus of the study, its key methodological features, and the most important findings.
   3. Introduction. Clearly explain the purpose of your study and situate it in any research literature that is relevant to your study. In qualitative research, research questions will typically be stated in more open-ended and general forms such as the researcher hopes to “discover,” “explore a process,” “explain or understand,” or “describe the experiences.”
      1. No deductive hypotheses
   4. Method. It is important that qualitative researchers always include this section in their reports. This section includes information telling how the study was done, where it was done, with whom it was done, why the study was designed as it was, how the data were collected and analyzed, and what procedures were carried out to ensure the validity of the arguments and conclusions made in the report.
      1. Sometimes include a section on researcher’s personal standpoints, disciplinary backgrounds, theoretical and paradigmatic perspectives, and how that may influence the research.
      2. Discuss strategies for qualitative research validity.
   5. Results. The overriding concern when writing the results section is to provide sufficient and convincing evidence. Remember that assertions must be backed up with empirical data. The bottom line is this: it is about evidence.
      1. You will need to find an appropriate balance between description and interpretation in order to write a useful and convincing results section.
      2. -Several specific strategies are discussed in the chapter (e.g., providing quotes, following interpretative statements with examples, etc.).
      3. We state that regardless of the specific format of your results section, you must always provide data (i.e., descriptions, quotes, data from multiple sources, and so on) that back up your assertions.
      4. Effective ways to organize the results section are organizing the content around the research questions, a typology created in the study, the key themes, or around a conceptual scheme used in the study.
      5. It can also be very helpful to use diagrams, matrices, tables, figures, and so on to help communicate your ideas in a qualitative research report.
   6. Discussion. You should state your overall conclusions and offer additional interpretations in this section of the report. Even if your research is exploratory, it is important to fit your findings back into the relevant research literature. You may also make suggestions for future research here.
   7. References: same as in a quantitative report.
   8. Discussion Question: Compare and contrast the research reports that are written for quantitative research studies and for qualitative research studies.
3. Writing Mixed Research Reports:
   1. Recommendations
      1. Know your audience and write in a manner that clearly communicates.
      2. Consider briefly articulating the mixed research philosophy or paradigm and your synthesis of this.
      3. Demonstrate the multiple perspectives on the research phenomenon studied.
      4. No single writing technique that is appropriate for mixed research in all cases.
      5. If writing up an equal status mixed design respects the thinking styles of each approach when writing about them and merging them in the report.
      6. Make sure to integrate ideas from qualitative and quantitative data, findings, and perspectives into warranted **meta-inferences** (an inference or conclusion that builds on or integrates quantitative and qualitative insights and findings)
   2. Structure report around the seven sections of the APA report discussed previously.
      1. Primary modification is to organize qualitative, quantitative, and integrated parts within each section in a way that works for readers.
      2. Organize Results section first
         1. By research questions and organize within each research question by method/paradigm
         2. Separate qualitative, quantities, and sometimes mixed questions.
         3. If sequential design, follow phases
         4. Integrate quantitative, qualitative, and mixed findings in a single narrative.
         5. Write essentially three separate subreports (one for the qualitative part, one for the quantitative part, and one for the mixed part) and publish separately.
   3. Discussion Question: Discusses the pros and cons for the different structures provided for mixed research reports as presented in the book.