

Research Paper Guidelines Department of Special Education

General Information

The research paper should be started toward the end of the first semester of study. At least two semesters should be allotted for completion of the research paper.

The first step toward beginning the research paper is to file the form "Intent to Write a Research Paper." If you chose to have someone other than your advisor direct your research paper, this must be approved by both the intended director of the paper and your advisor prior to filing your "Intent..." form (p. 2 of this document).

When submitting drafts of your research paper for feedback from the director of the paper, be sure that the draft is typed (unless otherwise directed) and legible. Give the paper to the director with ample time for him/her to critically read and analyze it. Remember, the faculty have numerous professional commitments and may not be able to read your paper immediately. Plan ahead for such delays so they will not effect your comps and graduation dates. In addition, always keep an extra copy of your most recent draft of your paper on hand so if one copy is misplaced or destroyed you will not have to begin again.

Approval of the research paper is given by the director of the research paper and the department head. The signature of the advisor is required to note that he/she has received a final copy of the paper.

The research paper must be typed on bond paper. The original copy of the final draft must be turned into the Department of Special Education office, with a copy to the director of the paper and one copy to your advisor.

The research paper is an important product of your Master's program. The topic chosen should be covered in a comprehensive manner. Appropriate writing skill should be exhibited and the content and handling of the paper should be executed in a professional manner.

Department of Special Education
University of Northern Iowa

REQUEST TO WRITE A RESEARCH PAPER FOR NON-THESIS MASTER'S DEGREE

Name _____ Student No. _____
 Last First Middle Date _____

Current Address _____

Master's Major _____

This research paper will be written for the course _____

or for _____
(state other circumstances)

his research paper to be written beginning _____
(month and year)

A brief outline must be attached.

Anticipated month and year of completion of the paper _____

Anticipated month and year of completion of the degree _____

Graduate Faculty Member's Statement

I am willing to serve as director of the research paper for this candidate for the graduate degree.

Graduate Faculty Member of UNI

(It is the student's responsibility to complete four copies of this form. Immediately send one form to the advisor, one to the director of the research study, one to the Graduate Board, and retain one copy for your file.)

- Copies to:
- Advisor
 - Director of the research study
 - Graduate Board
 - Graduate student

Discussion of Contents of Paper (Sample - P. 4)

Abstract

The abstract consists of a synopsis of the investigation, including an overview of the research paper itself along with the major conclusions. The abstract should be no longer than two double spaced pages. The format should include the title of the research paper, the investigator's name, and the text of the abstract.

Title and Approval Sheets

Use the standard UNI title and approval sheets as your model. This form must be typed on bond paper and in the same type as the rest of your paper. (See pp. 5-6 for samples.)

Table of Contents and List of Tables, Figures, and Appendices

The format to be used should be in accordance with the APA publication manual. The lists of tables, figures, and appendices are to be used only if table, figures, and appendices are used in your research paper. The table of contents is required for all papers.

Chapter I: Introduction

Introduction to the Problem

The "Introduction to the Problem" provides a brief, general introduction into the purpose and rationale of the literature review. It provides the reader an overview of the area of concern.

Statement of the Problem

The "Statement of the Problem" is designed to explain the significance of a problem in education and what the proposed literature review will investigate to clarify the problem.

This section is to provide the empirical background that leads toward the evaluation of a problem statement, which is to be the central focus of the literature review. (Statements and ideas used in this development of the problem should be referenced.)

Sample

Title page

Abstract

Approval Sheet

Table of Contents

List of Tables

List of Figures

List of Appendices

I. Introduction

Introduction of the Problem

Statement of the Problem

Delimitations

Definition of Terms

II. Review of Literature

Introduction to the Literature Review

Literature Review

Summary of the Literature Review

III. Conclusions, Implications, and Recommendations

Introduction

Conclusions

Implications and Recommendations

References

Appendices

SAMPLE

Title

(as many lines as needed)

A Research Paper

Submitted to

The Department of Special Education

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

UNIVERSITY OF NORTHERN IOWA

by

Name

Date

SUGGESTED SAMPLE

This research paper by:

Entitled:

has been approved as meeting the research paper requirement for the Degree of Master of Arts in Education.

Date Approved

Director of Research Paper

Date Received

Graduate Faculty Advisor

Date Received

Head, Department of Special Education

Definition of Terms

All terms that are relevant to the investigation and may be open to interpretation by the reader should be included. These terms should be defined behaviorally (observable and measurable) as they relate to and are measured in the literature that is reviewed. These are not conceptual definitions, but how the terms are used in their applied form in regard to the studies in the literature review.

Examples:

Poor: Adolescent--An individual in the pubescent state of maturation.

Better: Adolescent--An individual within the chronological age range of 12 to 16 years.

Poor: Intelligence-- Innate functioning ability of an individual.

Better: Intelligence--Innate ability as measured by a score on the Stanford Binet Intelligence Test.

Chapter II: Review of Literature

Introduction to the Literature Review

This section relates to the purpose and significance of the investigation. It is a brief overview of the study to enable the understanding of Chapter II to be independent of Chapter I. Each chapter should be designed to stand alone. For this reason, an introduction should provide enough information to the reader so the information in the chapter is clear without having to read the other chapters.

In addition, the introduction to the literature review should include an overview of how the literature review is organized. By noting the various components of the review and their sequence to the reader, clarity of information in this chapter will be enhanced.

Literature Review

The literature review should be as comprehensive as possible. It is important to use only primary sources, since occasionally secondary sources misquote or delete important aspects of the primary source.

Aspects of studies covered from paragraph to paragraph should be consistent. For example, if the instrumentation is noted for one study, other studies reviewed should include instrumentation so comparisons can be readily made by the reader without having to consult the original source. If such parallel information is not available in the original source, note this in your review.

An effective review of a study should include:

- a. purpose
- b. subjects
- c. instruments and procedures
- d. findings and conclusions

Each of these should be noted as concisely as possible.

Also, research investigations should be separated from position papers. Studies should be grouped for clarity as much as possible. For example, studies may be divided into studies in operation and follow-up of subjects if there are enough of each and it is a pertinent breakdown for your investigation.

At the end of each section of literature review, a short summary of pertinent limitations occurring in the studies may be noted. For example, no statistical analysis may have been done to substantiate the findings given or no randomization in sample selections may have been done.

Summary of the Literature Review

In this section, an overview of the literature review is given. This may include a synopsis of consistencies and inconsistencies found throughout the review and/or a summary of study results when the different sources are examined collectively.

Chapter III: Conclusions, Implications, and Recommendations

Introduction

This section should be a brief restatement of the problem(s) and overview of the activities undertaken in the project.

Conclusions

This section should be an organized, scholarly analysis of the evidence gathered throughout the paper, as it relates to developing solution(s) to the problem. The conclusions should be concise statements of inference or interpretation, each followed by a discussion amplifying and clarifying the nature of the conclusion.

Implications and Recommendations

This section should apply the conclusions inferred in the previous section to the problem, resulting in an analytical discussion of what the conclusions mean in terms of future action(s). The focus for discussion should be twofold:

- (1) What is to be done concerning the problem in light of the conclusions (implications)?
- (2) What are the methods to be used (how) to take these actions (recommendations)?

Articles in APA journals use from one to five levels of headings. For most articles, three or four levels of headings are sufficient.

Three levels:

Centered Uppercase and Lowercase Heading

Flush Left, Italicized, Uppercase and Lowercase Side Heading

Indented, italicized, lowercase paragraph heading. (with period at the end)

One or two levels:

Some short articles may require only one or two levels of headings:

Centered Uppercase and Lowercase Heading

Flush Left, Italicized, Uppercase and Lowercase Side Heading

Good writing is clear, precise, unambiguous, and economical. The following are some common faults to be avoided.

1. Avoid long awkward sentences and short choppy sentences.
2. Avoid using the indefinite "this." Do not begin a paragraph with "This showed..." or "This study showed..." as the antecedent may be any part of the preceding paragraph. Rather, say "Smith's (1975) study showed..."
3. Generally use past tense.
4. The paper should be written in the third person. Do not use "I." If it is necessary to refer to yourself, use "the author" or "the writer."
5. Avoid wordiness; look for exact words and clarify the thought. Avoid awkward phrasing that may need explanation.
6. Define technical terms; avoid jargon.

7. Use headings to help the reader follow your train of thought.
8. A writer's development and treatment of an idea must be referenced!
9. Avoid using contractions, such as don't and can't. Write out such words in full, such as do not and cannot.
10. Use i.e. and e.g. appropriately (i.e. = the total population; e.g. = samples of the population.)
Example: The primary colors (i.e. red, yellow, and blue) or the consonants (e.g., b, c, d, and f).
11. Avoid using the active voice for inanimate objects. ("The findings indicated..." Findings do not indicate. "It was indicated in the findings...")
12. Words formed with the following prefixes usually do not require a hyphen: bi, co, non, over, pre, and sub.
13. Numbers less than ten are spelled out.
14. Never begin a sentence with an Arabic numeral. ("2 of the studies..." is incorrect. Two of the studies... is correct.) Write out the numeral even if it is as long as 1977, etc. Also, do not begin a sentence with a roman numeral.
15. Generally avoid abbreviations unless the reference was clearly indicated previously.
"Wechsler Intelligence Scale for Children--Revised (WISC-R).
16. A correction or an insertion in a quoted extract should be enclosed in brackets.
17. Quotations should be given exactly as they appeared in the source. The original wording, punctuation, spelling, and italics must be preserved even if they are incorrect. Quotations of a sentence or two are incorporated in the text and set off by quotation marks. Quotations of more than 40 words are typed in a free-standing block of typewritten lines, and omit the quotation marks. Start such a block quotation on a new line and indent it five spaces from the

left margin (in the same position as a new paragraph). Type subsequent lines flush with the indent. Type the entire quotation double-spaced.

18. In a series of three or more terms with a single conjunction, use a comma after each term.
19. Your own words inserted into a question should be enclosed in brackets.
20. Enclose parenthetical expressions between commas ("My brother, you will be pleased to hear, is not in jail. ").
21. Place a comma before a conjunction introducing an independent clause ("Although the situation is perilous, there is still. . . ").
22. Three spaced periods (ellipsis marks) are used when words are purposely left out of a quotation or if a quotation does not start with the first word of the original quotation.
23. Make a paragraph the unit of composition.
24. Use definite, specific, concrete language ("It rained every day for a week" rather than "A period of unfavorable weather set in. ").
25. Omit needless words. ("This subject" rather than "This is a subject that").
26. Keep singulars and plurals consistent.
27. Keep verb tenses consistent.
28. Properly use subjective and conditional tenses.
29. NEVER end a sentence or phrase with a preposition.

Words and Expressions Commonly Misused:

1. "All right" not "alright."
2. One "alludes" to a book. One "eludes" a pursuer. Allude does not mean refer. Allusion is an indirect mention; reference is a specific one.
3. "Between" two; "among" three or more.

4. "Whether" not "as to whether."
5. Can and may.
6. "Data" are; "Datum" is. (Also strata, phenomena, media).
7. "Different from" not "different than."
8. "Composed of" not "divided into."
9. "Effect" as a noun means result; as a verb it means to bring about or to accomplish. " Affect" means to influence.
10. "Regardless" not "irregardless."
11. "Imply" and "infer" are not interchangeable. Something implied is something suggested or indicated, although not expressed. Something inferred is something deduced from evidence at hand.
12. Avoid starting a sentence with "However" when the meaning is "Nevertheless."
13. "In regard to" not "in regard to."
14. Do not use "kind of."
15. "Almost" not "most" as in "almost everybody" not "most everybody."
16. "Less" refers to quantity; "fewer" to number.
17. "Either or" and "neither nor." Do not use "not" after "not."
18. "One must do one's work" not "One must do his work."
19. When using "relevant" or "irrelevant," state to what something is either relevant or irrelevant.
20. Who or whom.

Notes On APA Editorial Style

(Taken from Section 3 of Publication Manual of the American Psychological Association, 5th edition, 2001.)

I. Abbreviations (3.20-3.29)

A. Accepted

1. Ones that appear as word entries in *Webster's Collegiate Dictionary* (e.g., IQ, ESP, AIDS).
2. Ones in special education. These must be explained first time used . Example:
Learning Disabilities (LD)

B. Periods (3.27)

1. Use after initials (J.R. Smith), abbreviation for United States when used as an adjective (U.S. Navy); Latin abbreviations (a.m., i.e., vs.), and reference abbreviations (Vol. 1; 2nd ed.; p. 6).
2. Do not use after capital letter abbreviations and acronyms (APA, NDA, IQ).

C. Use the following standard Latin abbreviations only in parenthetical material; in nonparenthetical material, use the English translation of the Latin terms.

cf.	compare	i.e.,	that is,
e.g.,	for example,	viz.,	namely,
, etc.	, and so forth	vs.	versus, against

II. Statistics (3.53-3.61)

A. Do not give a reference for statistics in common use.

B. Statistical symbols and mathematical copy are typeset in three different typefaces:

standard, boldface, and italic. The same typeface is used for a symbol whether the symbol appears in text, tables, or figures.

1. Greek letters, subscripts, and superscripts that function as identifiers (i.e., that are not variables) and abbreviations that are not variables (e.g., sin, log) are typed in a standard typeface. On the manuscript, do not italicize them.
 2. Symbols for vectors are bold.
 3. All other statistical symbols are typeset in italic type.
- C. When using a statistical term in the narrative, use the term, not the symbol. For example, use "The means were," *not* "The *Ms* were."

III. Numbers (3.42-3.49)

A. Use words to express:

1. The numbers below 10 that do not represent precise measurements and that are grouped for comparison with numbers below 10.
2. The numbers zero and one when the words would be easier to comprehend than the figures or when the words do not appear in context with numbers 10 and above.
3. Any number that begins a sentence, title, or text heading.
4. Common fractions.

B. Use figures to express:

1. Numbers 10 and above.
2. All numbers below 10 that are grouped for comparison with numbers 10 and above (and that appear in the same paragraph).
3. Numbers that immediately precede a unit of measurement.
4. Numbers that represent statistical or mathematical functions, fractional or decimal quantities, percentages, ratios, and percentiles and quartiles.

5. Numbers that represent time; dates; ages; sample, subsample, or population size; specific numbers of subjects or participants in an experiment; scores and points on a scale; exact sums of money; and numerals as numerals.
6. Numbers that denote a specific place in a numbered series, parts of books and tables, and each number in a list of four or more numbers.
7. All numbers in the abstract of a paper.

IV. Quotations (3.34-3.41)

A. Length

1. Short quotations are left in text and enclosed by double quotation marks.
2. Display a quotation of 40 or more words in a freestanding block of typewritten lines, and omit the quotation marks. Start such a block quotation on a new line, and indent the block about 1/2 in. from the left margin.

B. Citation must include author, year, and page in the text.

V. References (4.01-4.16)

A. Include only references cited in the text and only materials not generally available.

B. Format:

1. Journals (pg. 240)

- a. Author (surname and initial(s)). (date of publication). Title of article. *Journal Name* in Full, volume, and pages. Example:

Bekerian, D. A. (1993). In search of typical eyewitness. *American Psychologist*, 48, 574-576.

(Type the first line of each entry flush left, the second and succeeding lines indented)

2. Books (pg. 248)

a. Author (surname and initial(s)). (date of publication). *Title of book*. City of publication: Publisher's Name. Example:

Cone, J. D., & Foster, S. L. (1993). *Dissertations and theses from start to finish: Psychology and related fields*. Washington, DC: American Psychological Association.

VI. Punctuation, spelling, capitalization, and italics.

A. See appropriate sections of manual--read carefully.

SEE APA MANUAL FOR MORE INFORMATION!!!

Writing Style

Teaching the art of writing is beyond the scope of the Publication Manual. Instead, this chapter provides some general guidelines on effective writing, points out frequent faults, and suggests ways to assess and improve writing style. Mastery of grammar rules is not enough for good communication; craftsmanship in the use of language is also necessary. These guidelines are not intended to be so rigid that personal style is overly constrained, nor do they suggest the same style for all audiences.

To achieve clarity, good writing must be precise in its words, free of ambiguity, orderly in its presentation of ideas, economical in expression, smooth in flow, and considerate of its readers. A successful writer invites readers to read, encourages them to continue, and makes their task agreeable by leading them from thought to thought in a manner that evolves from clear thinking and logical development. The references in section 6.3 elaborate on these ideas.

2.1 Using the Precise Word

Make certain that every word used means exactly what it is intended to mean. Any writer, sooner or later, will discover that his own use of a word may not agree entirely with the definition in a standard dictionary. Prefixes are frequent troublemakers and require careful checking. For example, disinterested means impartial; uninterested means apathetic. Qualifiers are almost always a source of imprecision. Almost always? How much of the time is almost always? Expressions such as quite a large part, practically all, very few, and the like are interpreted differently by different readers or in different contexts. They weaken statements, especially those dealing with empirical observations.

Fortunately, choosing the precise word or phrase is easier for technical than for nontechnical concepts, where the choice is wider. The wider the choice, the greater the difficulty in selecting the exact word. Even the literate reader may be uncertain of the meaning of a rare or unfamiliar word.

Do not use words incorrectly (when you mean think, do not write feel); avoid colloquial expressions (use insert, not put in; report, not write up); and avoid coined terms (use concept, not conceptuum).

2.2 Avoiding Ambiguity

The referent for each term should be so apparent that the reader will not have to search over prior material. The simplest referents are the most troublesome: which, this, that, these, and those. If you include the referent every time you use this, that, these, and those (e.g., this test and that trial), you can avoid ambiguity. Avoid overuse of this, even with the referent. Also, make certain that the first sentence of a paragraph is comprehensible by itself; do not depend on a vague reference to earlier statements.

The editorial "we" is not used in scientific writing because it is often ambiguous. We means two or more authors or experimenters, including yourself. Use "I" when that is what you mean.

An awkward and often ambiguous construction results when a long string of modifiers are themselves nouns used as adjectives. For example, a new performance test of motor skills used in colleges is better than a new motor skills performance college test.

When writing about experimental groups, label them carefully. Using only numerals or letters can create ambiguity for the reader. Instead, whenever possible, use a key word to designate the treatment of each group. Remember that no reader is as familiar with your research as you are.

2.3 Orderly Presentation of Ideas

Thought units and sequences must be orderly. The reader expects continuity in words, concepts, and thematic development from opening statement to final conclusion, and is troubled by an author who misplaces words in sentences, abandons familiar syntax, shifts the criterion for items in a series, or clutters the sequence of ideas with irrelevances. Reread the manuscript for coherence some time after the original writing and remove any barriers to an even progression.

Punctuation marks contribute to continuity by providing transitions between ideas. They cue the reader to the pauses, inflections, and pacing normally heard in speech, although punctuation differs in speech and writing. Some writers tend to overuse commas; others are too frugal with them. Overuse may annoy the reader; underuse can confuse him. Use punctuation to support meaning.

Although transitional words are sometimes used as a crutch, they can aid the reader attempting to follow a complex experimental design or an abstract theoretical development. Some

transitional words are frequently misused. While does not mean whereas or although; due to and since do not mean because.

2.4 Economy of Expression

Short words are easier to comprehend than long words. However, the experienced writer will know when a long technical term should be selected for precision or when one long unusual word expresses an idea better than several short ones. The space necessary to express an idea lies somewhere between the terseness of telegraphic style and the circumlocution, excessive qualification, and verbiage of artificial scientific style. Authors in science are more often guilty of the latter than the former. Wordiness, redundancy, evasiveness, and clumsiness characterize unprofessional writing.

By the same token, writing only in short, simple sentences produces choppy prose; but writing exclusively in long, involved sentences creates difficult, not unreadable, material. Varying sentence length gives writing relief and interest. When involved concepts require long sentences, the components should march along like a parade, not dodge about like a broken-field runner.

The same cautions apply to paragraph length. Some writers construct paragraphs that are too long. On the other hand, many authorities on writing warn against short single-sentence paragraphs. Long material that does not break easily into paragraphs may need reorganization for clarity and logic. Even if reorganization is not necessary, consider breaking long paragraphs for visual relief.

2.5 Smoothness of Expression

Some linguistic situations can distract the reader: contradictions (real or inferred), insertion of the unexpected, omission of the expected, and sudden shifts. An author can usually catch real

contradictions by reading a paper once for this fault alone. Inferred contradictions are more likely to surface if someone else reads the manuscript.

Do not introduce a topic abruptly. If the reader is likely to ask "How does that fit in?" more transition is necessary. This fault is common in literature reviews by graduate students, but it is not unknown among their mentors. Similarly, do not abandon an argument or development of a theme suddenly. If a reader feels "left hanging," the discussion needs a concluding statement.

Sudden shifts in tense should be avoided. Do not move capriciously between past and present tense within the same paragraph or successive paragraphs. Past tense is usually appropriate for a literature review (Smith reported) or the experimental design or procedure (the judges were told), inasmuch as it is a historical account. Use present tense to describe and discuss the results that are literally there before the reader (shows auditory stimuli are more effective). The present tense suggests a dialogue between author and reader, appropriate at that point of the paper. Future tense is clearly needed.

Obviously, verbs must agree with their subjects, and pronouns with the nouns to which they refer. This simple rule is usually not troublesome except with plural words of Latin or Greek origin that end in "a". Data, criteria, and phenomena are plural, the high frequency of misuse notwithstanding. Check use of collective nouns; be certain that faculty or staff, for example, really refers to the collective group when using the singular verb or pronoun.

Frequently an author uses synonyms or near-synonyms to avoid repetition of a term. Although this intention is laudatory, the result may seriously detract from the flow of the paper. Learn to use a thesaurus, but with constraint. When a synonym is used, the reader cannot know if you intend to convey the same meaning as the first term or if a subtle difference in meaning is your intent. If monotony occurs, it may be from repeating ideas as well as words.

2.6 Consideration of the Reader

In scientific writing, devices that attract attention to words, sounds, or other embellishments, instead of ideas, are inappropriate. Heavy alliteration, accidental rhymes, poetic expressions, and clichés are suspect. They are unsuitable in scientific writing because they lead the reader, who is looking for information, away from the theme of the paper. Metaphors: Literal and figurative usages mix badly, to the detriment of communication; for example, "During the interview, the client sat with her head in her hands and her eyes on the floor."

Absolute insistence on the third person and the passive voice has been a strong tradition in scientific writing. Authorities on style and readability have clearly shown that this practice results in the deadliness and pomposity they call "scientificese." Some scientists maintain that this style preserves objectivity, but the validity of this assertion is suspect. Now, reputable journals are breaking the tradition with notable success, and writing manuals are recommending a more personal style. The American National Standard for the preparation of Scientific Papers (1972) gives the following guidelines:

Authors should not always use verbs in the third person, passive voice. When a verb concerns the interaction of inanimate objects ("the membrane is acted upon by the drug"), the active voice is usually preferable ("the drug acts on the membrane") because it is more direct and concise. When a verb concerns an author's belief or conjecture, use of the impersonal passive ("it is thought" or "it is suggested") is highly inappropriate. When a verb concerns action by the author, he should use the first person, especially in matters of experimental design ("to eliminate this possibility, I did the following experiment").

Constant use of the first person is not advisable, however, since it may distract the reader from the subject of the paper. (p. 13)

An experienced writer can use the first person and the active voice without dominating the communication and without sacrificing the objectivity of the research. If any discipline should appreciate the value of personal communication, it should be psychology.

Finally, as a matter of consideration to readers, writers should be aware of the current move to avoid generic use of male nouns and pronouns when content refers to both sexes, and may wish to use alternatives to words such as chairman and to avoid overuse of the pronoun he when she or they is equally appropriate.

2.7 Criticism, Assistance, and Improvement

For many able researchers, writing is a difficult and irksome task, but writing, after all, is the expression of thinking. It is better to seek advice from others before submitting a manuscript than to hope that the editor will overlook faults. Choose a critic from outside your specialized research area. A spouse or close friend is usually not a good critic; enemies are better. If they do a good job, they may become friends. If material does not read well to an intelligent person who knows little of your area, it is probably presented poorly. Psychologists who communicate with only the dozen or so experts in their narrow specialties are not contributing significantly to the literature.

References

- American Psychological Association. (2001). *Publication Manual*. Washington, DC: American Psychological Association.
- Flesch, R. (1949). *The art of readable writing*. New York: Collier Books.
- Strunk W. & White, E. B. (1972). *The elements of style*. New York: MacMillan Publishing Company.