

Key Structures of Research Article

The Abstract

Abstracts force us to synthesize what our research is about; they are written primarily for three reasons: they are submitted as part of paper manuscripts to journals; they are sent as part of the application package for conference presentations; and they function as a summary that readers use to decide if they want to read the whole paper. An abstract must include a lot of information in a short space, and are typically limited to a specified number of words. Often conference application forms provide specific formats for abstract submission.

Guidelines for writing an abstract (Brown, 1988)

An abstract can include a statement of topic, the purpose of the article, a description of participants, a list of materials used in the research, an explanation of materials, the statistical analyses used, a summary of results, and implications for the field.

An abstract should be 100 to 175 words, single-spaced in block form, which means no indentations, and include sections on problem, method, results, participants, type of research design, statistical significance levels, and conclusions. Finally, use only standard abbreviations and acronyms in your abstract (Tuckman, 1999).

The Introduction

Introductions to academic papers come in many sizes; there is no “one size fits all,” but they must make sense to the reader.

Structure of introduction (Swales, 1994)

Introduction of research paper can start by stating in a general way why this topic is interesting to your academic field. Second, include a statement of the problem using the present tense. Citation is optional for this step. State why this problem is important. This step has several possible versions. If you see a gap in the literature, your paper fills that gap. You can begin with words such as “however,” or “nevertheless.” If you are raising a question, your paper answers this question, if you are continuing a tradition, your paper is making a contribution, and if you are refuting a claim, your paper substantiates a counter claim. Many research papers put their purpose next followed by a literature review and research questions (RQs).

A literature review

A literature review can be understood as its own form of research, which is called secondary research and is sometimes referred to as library research. If you don't do a literature review, in other words, if you don't read any background information, then your only resource is your personal experience. It appears you are unaware of the published findings of others. The literature review keeps us from “reinventing the wheel” in that it tells readers what researchers in the field have done, so we can build on our results and not keep repeating findings that may be irrelevant. If many or most practitioners in a field did not publish articles with literature reviews, it would become difficult for that field to progress because knowledge would not accumulate.

Swales and Feak (2004) have surveyed research papers using the IMRD (Introduction, Methods, Results, Discussion) model, and conclude that the present tense is more common in the introduction and discussion while the past tense is more common in the method and results section because the research had already been accomplished..

The most obvious feature of a literature review is the discussion and citation of relevant published material, including journal articles, books, reviews, reports, conference papers, and even personal communication, all of which taken together can be called the literature. Citation of claims is important because at this point, readers are not interested in opinions. A literature review can be from one paragraph to several pages, but regardless of length, it should be a synthesis of what is relevant, not just a list of one thing after another, and it must directly support your research questions.

There is a misunderstanding about what goes into a literature review and why. It is often believed that a literature review is a gathering and analysis of all the material that has been written on a topic or at least all the material that is relevant to your topic. This is obviously impossible. It may be helpful to look at your research question (RQ). The RQs guide the construction of a literature review. If material is not relevant to your research question, it is not relevant to your literature review. The literature review is also the location of theory in your paper. Even if there is no formal theory about your topic, the selection, argument, and synthesis of relevant papers constitute the working theory of your paper.

Purposes of a literature review

The literature review serves many purposes:

1. It motivates the study and provides background (Bill VanPatten, personal correspondence, February 14, 2009). In fact, in addition to the term literature review, terms such as background and context are becoming more common. There is a strong connection between the literature review and research questions. This connection is so strong that we should be able to read the literature review and almost anticipate the research questions.
2. It educates readers on your topic. Many literature reviews are, in fact, short histories of a topic.
3. A literature review identifies your intellectual history by telling readers what you have read and what traditions you draw from.
4. It identifies your sources. The literature review provides a paper trail indicating where to find the articles, books, and other resources used. In that sense, it is a source file for others to access.
5. It provides researcher and readers alike ideas for further research. Reviewing literature gives a researcher ideas as well as possible research designs to draw from, replicate, or modify. For example, in doing a literature review, you may come across problems mentioned by other researchers that you might not otherwise been aware of, and these problems can be addressed and/or can become research questions.

The downside of a literature review is that it is difficult to write. This is because it is not always easy to know what to include or exclude, sometimes it is difficult to find sources, and other times there is too much material. Knowing how to synthesize material is a major problem for most writers. Lastly, it is often difficult to know how or where to begin a literature review because it requires special search skills.

3 main steps in the literature

1. State why this problem is interesting to your field.

e.g. *It is generally acknowledged that textbooks play an important role in language classes. For example, Author (19xx) states that textbooks provide significant language input.*

2. State a problem, contradiction, gap, or question using words such as: however, nevertheless, yet, but.

e.g. *Nevertheless, some researchers (Author, 19xx; Author, 20xx) have shown that many text authors employ artificial dialogues that lack normal language features.*

3. State the purpose of the paper.

e.g. *The purpose of this paper is to investigate current textbooks comparing their dialogues with those of native speakers.*

Research procedures

For each piece of equipment or each data collection instrument, explain how it was used and what the participants did. For example, if a questionnaire was administered, readers want to know how many students actually filled it out, what were the environmental conditions (room, time of day), and how long it took to complete the questionnaire. It might be a wise idea to begin and maintain a log in which this type of information could be written down and dated. The issue in the method section is replication. In other words, does a reader have enough information from your report so that, if they wanted, they could do the same thing you did?

Analysis

The analysis section has various names including data analysis, design, and statistical procedures. The purpose of the analysis section is to tell readers how the data were analyzed in order to answer the research questions. In your analysis section, it would be appropriate to state the design you used, which analysis you employed to answer each research question, why you used that particular analysis, and what it will tell you.

Research Design

Common research designs are experimental designs and quasi-experimental designs, but case study and survey design are also well known. The research design was probably first mentioned in the literature review, and possibly mentioned again in the Participants section. If the research design impinges on the analysis, state how that impingement works. For example, in an experimental or quasi-experimental design, probably the control and experimental groups will be compared and the resulting data analyzed, and how that data will be analyzed can be explained here.

Data Analysis

To report your data analysis, consider your research question or questions, and ask yourself how you plan to answer each question. That is, try to answer what kind of data collection instrument you plan to use, what kind of data you plan to get from it, how you plan to analyze the data, and how the results of that data analysis will answer your research question. If a statistical procedure is performed, for example, to compare pre-test to post-test scorers of experimental and control classes, then report the statistic you plan to use, why that particular statistic was selected, what its assumptions are, and what you hoped to accomplish by using it.

Results

In the Results section, you report what you found, being careful only to report, avoiding the temptation to discuss your results. It is helpful to present your results in the same order as your research questions. In some cases, tables may help to summarize the data. Brown (1988, p. 54) recommends a prose description followed by a table, but in chapter four, Swales and Feak (2004) seem to suggest a table followed by a data commentary. Whichever organization you choose, you should use it consistently in your paper.

For results of qualitative data gathering, do not include raw, unanalyzed data unless you wish your readers to have access to it. In that case, include it in an appendix. The reader already knows the data collection instrument you used to gather the data (materials), how you went about it (procedures), and how you analyzed it. In the Results section, we want to know what you found.

Discussion

This is where you tell your readers what it all means. We know from the Results section what happened, now we want to know why it happened. After you interpret your answers for us, think about their implications. Perhaps you could suggest changes in practice, reflect on unanswered questions, or suggest directions for future research.

References

A reference is a short citation consisting of the basic descriptors that typically identify books, journal article, magazines, newspapers, reports, brochures, or even movies and songs. In short, a reference is a locator device for anything that might be mentioned or discussed in your paper. References are placed at the end of a paper in an agreed-upon format; the two most common (in the humanities and social sciences) are APA (American Psychological Association) and MLA (Modern Language Association). Both the APA and MLA are large academic organizations, which in addition to holding major conferences, sponsor journals that publish articles of interest to their members. Over time, these organizations created format rules that eventually grew into publication style manuals. Many academic disciplines including applied linguistics, developmental education, and English as a Second Language (ESL) use APA formatting.

The reference section is directly connected to each cited source throughout the paper, but especially to the literature review. If we see the literature review section as telling someone about your friends, the reference section is what provides your friends' addresses and contact information. The reference section is important because it holds all the citations for the paper, and as such functions as the paper's database. In that sense, the reference section is part of the paper's external validity or

generalizability, because it is part of the replication process. Without the reference section, a researcher who wanted to replicate all or part of your research would not be able to do so because he or she would not have access to the same background information. For this reason, when reading research articles, the reference section of those articles should be read and carefully searched for additional material that can contribute to your research project. The correct form depends on the style manual you use. For example, in the APA style, a single author article published in a journal gives the author's last name followed by his or her initials, the year of publication, the title of the article, the name of the journal which is in italics, the volume number also in italics, the issue number in parentheses, and the page numbers.

Reference Guide based on APA (6th Edition)

Remember to check that all citations in the paper are listed in your references, and all citations in the reference section are in the paper.

In the body of the text

One author citation:

In discussing the relationship of evidence, Brown (1988) states . . .

In a study of evidence (Brown, 1988), it was found that . . .

Citation with several authors:

Several studies (Gomez & Jones, 1979; Smith, 1988; Griffiee, 1999) have noted . . .

Ary, Jacobs, and Razavieh (1990) compared . . .

Author & page number (giving page numbers is recommended for books & long articles)

It is strongly suggested (Dunkel, 1990, p. 70) that . . .

It is strongly suggested (Dunkel & Gorsuch, 1990, p. 70) that . . .

Dunkel and Gorsuch (1990, p. 70) strongly suggest that . . .

Reference section at the end of the paper

Journal articles:

Griffiee, D. T. (2002). Portfolio assessment: Increasing reliability and validity. *The Learning Assistance Review*, 7(2), 5-17.

Books:

Casazza, M. E., & Silverman, S. L. (1996). *Learning assistance and developmental education*. San Francisco, CA: Jossey-Bass.

Edited Book:

Jones, S., & Smith, C. R. (Eds.). (1986). *Bilingual education*. New York, NY: Praeger

Article or chapter in an edited book:

Griffiee, D. T. (1997). Where are we now? Trends, teachers, and classroom research. In D. T. Griffiee & D. Nunan (Eds.). *Classroom teachers and classroom research* (pp. 23-35). Tokyo: Japan Association for Language Teaching.