

Guest Editorial

Writing the Research Paper: A Review



College & Research Libraries receives over a 100 submissions each year; approximately 30% are accepted. What follows are a few observations and tips for planning and writing a research paper that may be beneficial to potential authors.

A common weakness is the omission of the problem statement. In the problem statement, provide the reader with the context for the research, clarify the focus of the research that you have performed, explain the gap in knowledge that your research is designed to fill, and describe why the research and results are important to the field. Clarity and succinctness are characteristics of good problem statements. A more complete discussion of problem statements appears in a 2007 editorial written by Herson and Swartz for *Library & Information Science Research*.¹

The literature review is another component of research submissions. A well-done literature review benefits both the researcher and reader. The process of doing the review gives the researcher a thorough grounding of the subject matter. It helps refine issues and determine whether others have tried to answer the question(s) under consideration. If there are others who have looked at similar questions, the literature review will reveal the perspectives they took and the methods they used. It will also inform the researcher of the strengths and weaknesses of those methods. Through the literature review, you provide the reader with more of the context for the research, and show how your research fits in with other research on the topic. It is in this section that you help the reader understand the basis for decisions of focus, and method. "Literature reviews identify, classify, and explain the most important scholarly answers to important research questions."²

The purpose of the methodology section is to describe the method(s) used to gather and analyze data. In this section clarify the questions by making them more specific. Identify the criteria that you will use to measure each variable. Describe what evidence is needed to answer your questions in the study you have designed. In some cases a research question can be tackled with multiple methodologies. It is the researcher's focus and definition of terms that determines the methodology chosen. Let us take one hypothetical example. In the problem statement, the researcher states the goal of the research is to examine the quality of NiftyLearn, a software program developed for staff training. The goal, as stated, is too general to research. Three key terms must be refined in order to gather data. What is meant by training; what is the context in which training is being offered—self learning, guided workshops? Who are the staff—students, full-time personnel? What is the level of expertise of those being trained? Is this totally new material for those being taught; or, is the material designed to introduce and teach changed workflows?

The focus of this hypothetical research is the quality of the software. What is meant by quality? How will you know it when you see it? Quality could be defined in terms of reduced training time from previous methods used (efficiency). It could be defined in terms of the participants achieving a certain score on a test of terminology (knowledge gained). It could also be defined in terms of error rates for subsequent tasks performed (accuracy). Each of these interpretations of quality (efficiency, knowledge gained and accuracy) can be defined as a variable that can

be tested and measured. An exploration of each of these variables by itself or one at a time is descriptive. Analytic studies analyze the relationship between two or more variables.

There are other ways to view quality that may call for more qualitative approaches to gathering data. The researcher may be interested in knowing whether the software is easy to use. Or, whether the material keeps the user's interest? One approach for answering these types of questions is to gather data through focus group discussions. One observation of submissions is that authors inexperienced in using qualitative methods fail to provide a description of the checks and balances in gathering, transcribing, and coding data. For example, were there multiple coders? What was the intra-coder consistency? How were the categories developed from the data? In summary, the methodology section provides justifica-

tion for choosing the approach taken. In it you provide the reader with a refinement of the concepts under study and establish a strategy for measuring them. In it you describe how you selected the cases for study and provide the instruments for generating information

Now for your 15 minutes of fame, the conclusions. Avoid conclusions that could have been written before the research was performed. What did you really learn? As the expert of this project, this is your chance to tell the reader of any insights gained and their importance. Tie the conclusions to the data and analysis. The conclusions can also address learned weaknesses in your approach to the problem. What are questions that arose during the research process that need to be answered by future research?

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Notes

1. Peter Hernon and Candy Swartz, "Editorial: What is a Problem Statement?" *Library & Information Science Research* 29 (2007): 307-309.

2. Lisa Baglione, "Doing Good and Doing Well: Teaching Research-Paper Writing by Unpacking the Paper," *PS: Political Science and Politics* 41 (July 2008):596.

Resources

Kwiatkowski, Thomas and Robert Silverman, "Research Fundamentals:II. Choosing and Defining a Research Question," *Academic Emergency Medicine* 5, no. 11 (November 1998):1114-1117.

Lipowski, Earlene, "Developing Great Research Questions," *American Journal of Health-System Pharmacy* 65 (Sept 1, 2008):1667-1670.

Mayer, Richard E. "Old Advice for New Researchers," *Educational Psychology Review* 20 (2008):19-28.



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