

Identifying and Finding Quantitative and Qualitative Research

Slide 2

Librarian: Let's take a few minutes to talk about quantitative and qualitative research studies – what they are and how they differ from each other, as well as how to identify them when searching in library databases.

Quantitative research is objective; a quantitative researcher is trying to measure something and then determine the meanings of ***differences, relationships or associations between identified variables***.

Qualitative research, on the other hand, is subjective; a qualitative researcher is attempting to explain or better understand a naturally occurring phenomenon by seeking out the ***experiences, perceptions and opinions of people who have experienced the phenomenon***.

In a quantitative study, results are reported in terms of statistical significance of numeric data. If you read a quantitative research study report, you should expect to find data tables, with information about the statistical significances of findings.

In a qualitative study report, you will find results reported in terms of theories, interpretations, or derived meanings. Expect to find tables with data expressed as words.

More generally, quantitative research tests a theory using ***deductive*** reasoning to synthesize data. That makes the focus of results **concise and narrow**.

Qualitative research is usually **broad and more complex** than quantitative research. Researchers use ***inductive*** reasoning to synthesize qualitative data intended to develop new theories or understandings of a topic.

In quantitative research, the researcher is ultimately interested in a cause and effect relationship, while a qualitative researcher is ultimately interested in meaning, or discovery.

In quantitative research, the basic elements of analysis are numbers and statistical analyses. In qualitative research, the basic elements of analysis are words, narrative, and meaning.

Student: I think I understand the difference between quantitative and qualitative studies now, but when I find an article, how will I be able to tell if it discusses a quantitative or a qualitative research study?

Librarian: That's a great question. First, you need to make sure that the article reports on ***original research***. Many articles you can find through library databases may be what we call "white papers" or academic discussions of a topic. These may be useful articles if you are doing background research on a topic, but if an assignment *specifically* asks you to find articles that discuss research methods, you need to look further. Before you assume that an article reports on a research study, you need to figure out if the authors collected original data or used existing information for their analysis. Either way, the identification of a data source and a report of data analysis are necessary in an article that reports on a research study.

Student: Oh, so if the authors don't discuss the collection and analysis of data—whether quantitative or qualitative—it may not be a report of a research study?

Librarian: Yes, that's correct.

Slide 3

The first place to look is in the abstract. An abstract is a high-level overview of the article, and you can usually tell from the abstract if the authors collected data and reported study findings within the article because the abstract will tell you. If the abstract doesn't include specific information about data collection, it may be simply a scholarly article or a synthesis of other literature. Look for evidence the authors collected and analyzed data!

Slide 4

Other things to look for are descriptions of the techniques the authors used to conduct the study. You can often find this information in the abstract or in the introductory or overview paragraphs. For example, in this abstract the authors reported that they collected data using interviews. Remember, an interview is almost always a qualitative data collection technique!

Slide 5

Conversely, in this abstract and introductory paragraph, the authors tell us they collected data from surveys sent to 224 people. They also mention right here in the abstract that the study produced statistically significant findings which is an indication of a quantitative research study. Why? Because data collected in a quantitative study are numeric, and numeric data are analyzed using statistics. Data collected in a qualitative study are not in numeric form and are not analyzed using statistics.

Slide 6

You might also find information about the nature of the study in the title of the article. Here are examples of article titles that tell you immediately whether the article reports on a qualitative or quantitative study.

Slide 7

You can also distinguish a qualitative study from a quantitative study by looking at the Results section of the article. In the Results section of a qualitative study, you are likely to find tables of themes, constructs, and findings—data displayed in words, not numbers. Here are examples of qualitative data tables. You might find some numeric data in a qualitative study, but typically the numbers are reported to describe the study population or sample, as in this example. This demographic information does not make the study quantitative.

In the Results section of a quantitative study, you can expect to see a summary of numerical results, including tables, charts, and graphs.

Slide 8

Finally, if you scan the Results or Findings sections of the study, you will find information referring to the authors' conclusions. In a qualitative study, you are likely to find a discussion of themes or inferences. Here's an example.

In a quantitative study, you should expect to find a discussion of the significance of the findings—there's that word again: significance. Since qualitative studies don't report numeric data, you can assume that an article that discusses significant results is a quantitative study.

Slide 9

One more thing. Some research studies are what we call "mixed method" studies. In a mixed method study, the researcher uses both qualitative data collection processes such as interviews and quantitative data collection processes, such as surveys or other instruments that measure things numerically. Mixed method studies are not uncommon, so watch out for them. If the assignment specifically asks you to find or identify either a qualitative or a quantitative study, you should avoid mixed method studies since they are neither fully qualitative or quantitative.

Here's an example. You can see here that the researchers clearly state that this is a mixed method study, and you can see in the Results section that data are presented in both a qualitative data table and in numeric fashion.

Slide 10

In this tutorial, we've discussed the differences between quantitative and qualitative research studies, and how to identify them in your library database searches.

As you continue to search for appropriate research studies, you may run into more questions, or cases where you're not quite sure what kind of study a specific article discusses. This is a great time to reach out to a librarian for further assistance! Be sure to check with your instructor as well, as their opinion will be the final verdict whether a particular study is suitable for your assignment.

Good luck and have fun! Never hesitate to reach out for further assistance.