

Developing Research Questions

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Developing research questions is one of the hardest parts of starting the dissertation for doctoral students. It is important to make sure the research questions address these characteristics: (a) your questions must be precise; (b) your questions must cover the problem you want to address; and (c) our questions must indicate how you will create the answer (Creswell, 1999).

Developing Research Questions for a Quantitative Study

In quantitative studies, investigators use research questions and hypotheses to shape and focus on the purpose of the study. These research questions tend to interrogative questions that the researcher seeks to answer.

There are usually two types of quantitative questions: (a) *descriptive questions*, based on descriptive statistics; and (b) *inferential questions*, based on inferential statistics. Here are some examples:

Descriptive Research Questions:

- How do the students rate on critical thinking skills (descriptive question focused on the independent variable)?
- What are the students' achievement levels (or grades) in science classes (a descriptive question focused on the dependent variable)?

Inferential Research Questions:

- Does critical thinking ability relate to student achievement (inferential question relating the independent variable and the dependent variable)?
- Does critical thinking ability relate to student achievement, controlling for the effects at prior grades in science and the educational attainment at the eighth-graders' parents (an inferential question relating the independent and the dependent variables) (ibid)?

Those two question types are one approach to developing quantitative research questions. Another approach to developing research questions for a quantitative study is to use the typical template. The typical research question for a quantitative study uses about four to five phrases. For example, the phrase, first, "*To what degree....*" is typical of quantitative questions. Second, "*How much....*" is another. Third, "*Is there a relationship between.....*" Fourth, "*What is the relationship between....*" And fifth, "*What is the difference.....*"

The researcher will be measuring the relationship between the independent variable and dependent variables (ibid).

Here are some typical examples of quantitative questions that drive the investigation. See below:

Table 1: Example of Research Questions for a Quantitative Study

Type 1a	1a: To what degree do first-year department managers subscribe to Theory X management beliefs as measured by the Myers-Brigg Scale?
Type 2a	2a: Does the rise in bad management behavior lead to employee turnover in an organization?
Type 3a	3a: Do first-year department managers report adhering to an authoritative leadership style as measured by the Myers-Brigg Scale?
Type 4a	4a: Is there a relationship between autocratic management style and narcissism behaviors of first-year department managers department as measured by the Myers-Brigg Scale?
Type 5a	5a What is the relationship between autocratic management style and narcissism behaviors of first-year department managers department as measured by the Myers-Brigg Scale?
Type 6a	6a: How much do time do first-year department managers spend mentoring and coaching during their first year?
Type 7a	7a: What is the difference between autocratic management style and narcissism behaviors of first-year department managers department as measured by the Myers-Brigg Scale?

Developing Research Questions for a Qualitative Study

Developing qualitative research questions can be a bit challenging. The most common format for developing qualitative research questions is ask a broad, encompassing question. The basic format for a qualitative research question is very different from quantitative research questions.

Qualitative research questions assume two forms: (a) *central questions*; and (b) *associated sub-questions*. The format of the qualitative research questions usually relate back to the strategy of inquiry (ibid).

The typical research question for a qualitative study uses about two phrases. For example, the phrase “*How do....*” is typical of qualitative questions. Second, “*How does....*” is another. Third, is “*What is the experience of*” Last, “*Why does.....*” is typical of qualitative research questions. In the practice of conducting qualitative research, the researcher will be investigating a phenomenon.

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Qualitative research questions typically use *exploratory verbs* and convey the research design. Common verb used in qualitative research questions: (a) discover (e.g. grounded theory), (b) seek to understand (e.g. ethnography); (c) explore a process (e.g. case study); (d) describe the experiences (e.g. phenomenology); and (e) report the stories (e.g. narrative research) (ibid).

Here are some typical examples of qualitative questions that drive the investigation. See below:

Table 2: Example of Research Questions for a Qualitative Study

Type 1b	(1b): How do freshmen students describe the experiences of living in a residence hall learning environment?
Type 2b	(2b): How does the 911 tragedy survivor describe their experiences and health issues in a post-terrorist state in the U.S.?
Type 3b	(3b): What is the experience of nursing staff during the interrogation following Chief Nursing Officer separation turnover?
Type 4b	(4b): Why does domestic violence often occur with victims that are financially dependent on the perpetrators for shelter?

References

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