

Practical Research 2

Quarter 1 - Module 7

Quantitative Research Questions



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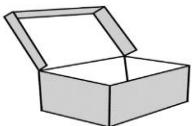
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What I Need to Know

Good day researchers! In this lesson, you are going to learn how to:

State research questions (CS_RS12-Id-e-4)

Moreover, in this lesson, you will learn concepts and do practice activities that will help you do the following:

1. define what a research question is;
2. enumerate and characterize the different types of quantitative research questions; and
3. write and formulate a quantitative research question.



What I Know

Before you proceed to the different activities inside the module, answer first the short **pre-assessment activity** below to find out what you already know about the topic of stating research questions.

Select your answers from the options provided after each item. Choose and encircle the letter of the correct answer.

1. What type of research question is used to determine the nature or manner of connection between or among variables?
 - A. Comparative research question
 - B. Connection -based research question
 - C. Descriptive research question
 - D. Relation-based research question
2. Which of the following question is an example of descriptive research question?
 - A. What do customers use as criteria for choosing which fast food restaurant chain to patronize?
 - B. Is there any relationship between age and perception of genre of music?
 - C. What is the difference in perceptions towards blended learning between the parents and the students?
 - D. What are the differences in usage behavior on social media between the senior high school and junior high school students?
- C. What part of a research study helps you specify and center your study?
 - A. Research problem
 - B. Research question
 - C. Research title
 - D. Research topic



4. What is the variable in this research question, "What is the range of support available to person with disabilities in the community?"
 - A. In the community
 - B. Person with disabilities
 - C. Range of support available
 - D. What is the range

5. In this research question, "What is the relationship between study time and exam scores among college students?" What is the independent variable?
 - A. College students
 - B. Exam scores
 - C. Study time
 - D. The relationship

Lesson 1

Quantitative Research Questions



What's In

In your previous lesson, you studied about stating research problems. Can you still remember the elements of a research problem? In the given example below, write in the blank the correct information about the research problem.

Example of a research problem:

To determine the extent of cyberbullying in the Senior High School students in Marikina City for the school year 2019-2020

- A. Aim or purpose: _____
- B. Subject Matter: _____
- C. Locale of the Study: _____
- D. Population Involved: _____
- E. Period of the Study: _____

In today's lesson, you will learn about how to state quantitative research questions. This is very useful in writing a quantitative research. To be able to write a good research, you need to be able to formulate good research questions.



What's New

Let us start our lesson on stating research questions by looking at the activity.

Activity

Read the article and research questions below. After reading, choose the research questions which is more appropriate and explain your answer.



The Philippines is a diabetes ‘hotspot’

By: Rafael R. Castillo

Philippine Daily Inquirer / 05:10 AM January 09, 2018

The Philippines is considered one of the diabetes “hot spots” in the Western Pacific region, where the disease is already reaching epidemic proportions. Our government knows this too well, and the increased taxes on sugary drinks is just one of the steps being taken to stem the tide.

Research Topic: **The eating habit of Filipino teenagers**

Research Questions:

- A. How do artificial sweeteners affect the health of Filipino teenagers?**
- B. How does aspartame affect Filipino teenagers who suffer from juvenile diabetes?**

Which of the research questions is more appropriate to use corresponding to the given research topic? Why?



What is It

Research Questions

Your curiosity to certain problems fuels your desire to conduct a research study. In research, you are finding answers to a researchable problem in which you, as the researcher, should delve further into the topic. In order to help you find those answers, a good research question must be formulated. As defined by Bordage & Dawson (2003), a research question is “the single most important component of a study...It is the keystone of the entire exercise.” For this reason, a good research question will lead you to the answer to your research problem.

Types of Quantitative Research Questions

There are three common types of quantitative research questions:

1. **Descriptive research questions** – designed to uncover a respondent’s response towards a particular question or variable.

Steps:

1. Choose your starting phrase
2. Identify and name the dependent variable
3. Identify the group(s) you are interested in



4. Decide whether the dependent variable or group(s) should be included first, last or in two parts
5. Include any words that provide greater context to your question

Example:

How prevalent is the use of social media among young adults?

2. **Comparative research questions** – designed to help you identify clear difference between two or more groups based on one or more variables.

Steps:

1. Choose your starting phrase
2. Identify and name the dependent variable
3. Identify the groups you are interested in
4. Identify the appropriate adjoining text

Example:

What is the difference in the daily internet usage between Filipino men and women?

3. **Relationship-based research questions** – used to described an association or trend between two or more variables within one or more demographic groups. (www.bl.uk)

Steps:

1. Choose your starting phrase
2. Identify the independent variable(s)
3. Identify the dependent variable(s)
4. Identify the group(s)
5. Identify the appropriate adjoining text

Example:

What is the relationship between listening to different genres of music while studying and exam scores of high school students?

Steps in Formulating Quantitative Research Questions

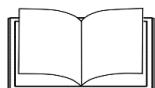
1. Choose the type of quantitative research question.
2. Identify the different types of variable you are trying to measure, manipulate and/or control, as well as any groups you may be interested in.
3. Select the appropriate structure for the chosen type of quantitative research question, based on the variables and/or groups involved.
4. Write out the problem or issues you are trying to address in the form of a complete research question.

Criteria for Evaluating Research Questions (Bryman,2008)

- ✓ They should be clear in the sense of being intelligible.
- ✓ They should be researchable. That is, they should allow you to do research in relation to them. This means that they should not be formulated in terms that are so abstract that they cannot be converted into researchable terms.
- ✓ They should have some connection(s) with established theories and research. This means that there should be a literature on which you can draw to help illuminate how your research questions should be approached. Even if you find a topic that has been scarcely addressed by social scientist, it is unlikely that there will be no relevant literature.
- ✓ Your research questions should be linked to each other. Unrelated research questions are not likely to be acceptable, since you should be developing an argument in your study. You could not very readily construct a single argument if you have unrelated research questions.



- ✓ They should at the very least hold out the prospect of being able to make an original contribution - however small - to the topic.
- ✓ The research questions should neither be too broad nor too narrow.



What's More

Answer the activities that will follow to practice your knowledge and skill about the topic on quantitative research questions.

Activity 1

Determine the type of questions outlined in the table below. Write your answer in the space provided.

Questions	Types
1. What are the differences in attitudes towards online learning between public school students and private school students?	
2. How often do the Senior High School students in Marikina City use Facebook?	
3. How do physical exercises compare to mental exercises in the performance tests of teenagers?	
4. How often do you buy mobile apps for educational learning?	
5. What is the relationship between study time and exam scores among senior high school students	
6. What is the relationship between job satisfaction and salary among Overseas Filipino Workers?	

Activity 2

Choose from the pool of words in the box and complete the information asked.

on	female	is	the	perceptions	between
difference	in	professionals			
	shopping	male	the		
what		online		and	

Starting Phrase:

Dependent (Independent)
Variable:

Group(s):

Adjoining text:

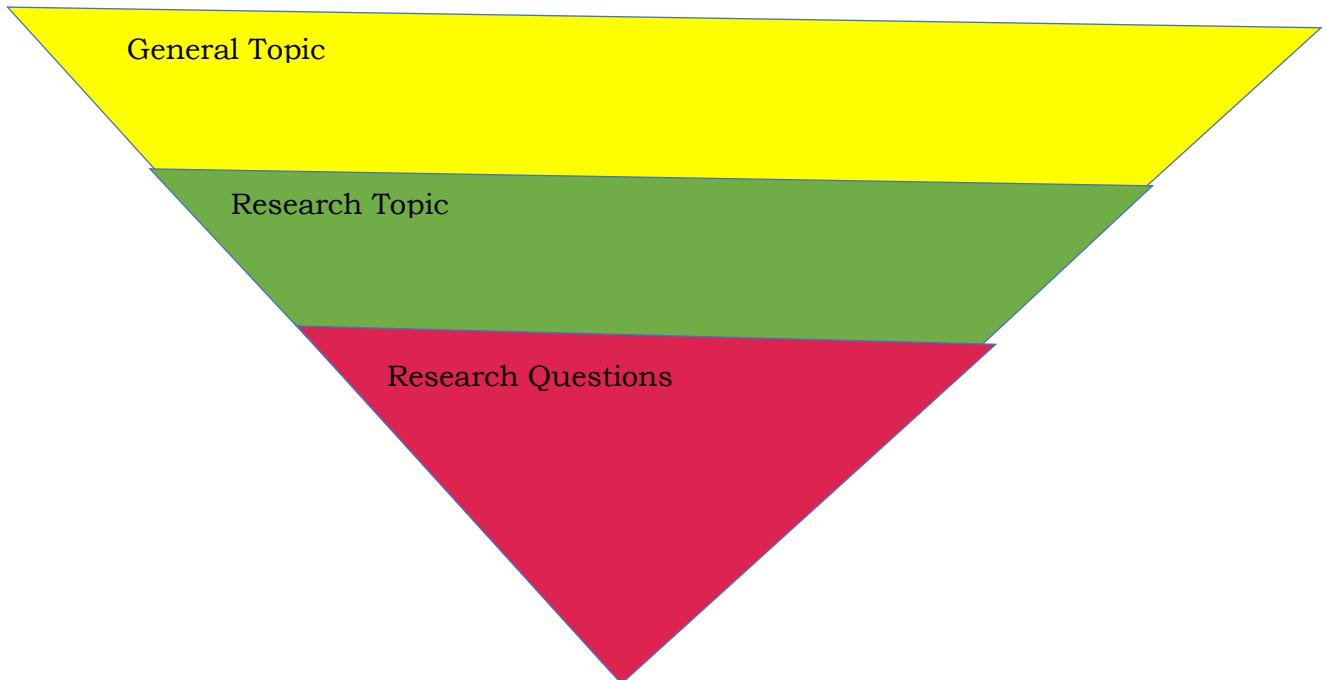
Research Question:

Type of quantitative research:



Activity 3

Complete the following information below.



What I Can Do

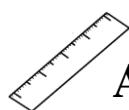
Apply what you have learned about stating quantitative research questions by writing your statement of the problem with quantitative research question/s.

Statement of the Problem:

Quantitative Research Questions:



Criteria	Score	Comments
Questions are clear and intelligibly formulated	10 pts.	
Questions are researchable	10 pts.	
Questions have connection(s) with established theories and research	10 pts.	
Questions are linked to each other	10 pts.	
Originality of the questions	10 pts.	
Questions are neither too broad nor too narrow	10 pts.	



Assessment

Showcase the knowledge and skills you have learned in this lesson by answering the assessment activity.

Choose and encircle the letter of the correct answer.

1. What type of quantitative research question is used to identify clear differences between two or more groups based on one or more variables?
 - A. Comparative
 - B. Descriptive
 - C. Quantitative
 - D. Relationship-base
2. In formulating a research question, which of the following must the researcher start with?
 - A. Browse lots of general books for ideas.
 - B. General topic
 - C. Research problem
 - D. Research title
3. As researcher you want to describe an association among the three variables within two demographic groups. Which of the following types of question will you use?
 - A. Comparative type of question
 - B. Descriptive type of question
 - C. Quantitative type of question
 - D. Relationship based type of question
4. What type of quantitative research question requires at least one independent variable?
 - A. Comparative research question
 - B. Descriptive research question
 - C. Quantitative research question
 - D. Relationship based research question



5. In this research question, “What effect does social media have on teenagers’ minds?” All the statements below are correct except,
 - A. The question is researchable.
 - B. The question has no specific group.
 - C. The question is not specific on what kind of effects.
 - D. The question is not specific on what type of social media.
6. What type of quantitative research question is used to uncover a respondent’s response towards a particular question or variable?
 - A. Comparative research question
 - B. Descriptive research question
 - C. Quantitative research question
 - D. Relationship-based research question
7. You read this type of research question, “What is the relationship between job satisfaction and salary among NCR residents?” What is the independent variable?
 - A. Job satisfaction
 - B. NCR residents
 - C. Relationship
 - D. Salary
8. A researcher formulated this research question: “How does violence in computer game affect children?” What do you think is the general topic of the study?
 - A. Computer games
 - B. Computer game violence
 - C. Juvenile crime rate
 - D. School violence
9. Which part of a research focuses on how the variables under investigation relate to each other, affect different groups, or how they might be defined?
 - A. Central questions
 - B. Qualitative research question
 - C. Quantitative research question
 - D. Research problem
10. Which of the following illustrates a quantitative question?
 - A. What is the role of the principal of a school?
 - B. What is the experience of identifying as LGBTQ+ in the foster care system?
 - C. What do we know about the role of IT in preventing falls among seniors?
 - D. What is the difference in the daily calorie intake between men and women in Marikina City?





Additional Activities

Check the column that rates the extent of learning you have had about quantitative research question.

Concepts As a researcher, I...	Strongly Agree	Agree	Disagree	Strongly Disagree
1. can define the term “research question”.				
2. can enumerate the different types of quantitative research questions.				
3. can characterize each type of quantitative research questions.				
4. can follow the steps in formulating quantitative research questions.				
5. am able to write appropriate quantitative research questions.				



References

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