

Descriptive Research

Stephen E. Brock, Ph.D., NCSP
California State University, Sacramento

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Introduction

- ◆ Descriptive (AKA Survey) Research is a quantitative methodology
 - Very similar to qualitative research, but primarily uses numbers (vs. words) to describe a phenomena.
 - Used to describe the distribution (or make inferences about the distribution) of a variable within a population.
 - Sampling is a critical issue (unless your are able to consider all members of the population).
 - Reports results via descriptive statistics (measures of central tendency and variance are the most common).

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Portfolio Activity #5: Mini-proposal 1

- ◆ Briefly describe a descriptive research project relevant to one of your identified research topics.
- ◆ Small group discussions.

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Challenges

- ◆ A unique problem faced by some forms of descriptive research is the lack of participant response (“return rate”).
- ◆ Another problem specific to this research method is the fact that researcher’s are often unable to explain to participants exactly what a given word or question means.
 - E.G., “Does your school district have a suicide prevention program?”
 - What does this mean?

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Strategies: Two Research Designs

1. Cross-Sectional Surveys
 - Data collected at one point in time.
2. Longitudinal Surveys
 - Data collected at two or more points in time.
 - Used when your are interested in trends over time
 - ◆ Trend Survey, changes in a variable over time
 - ◆ Cohort Survey, one population over time
 - ◆ Panel Survey, one group (same individuals) over time
 - ◆ Follow-up Survey, changes in a previously studies population

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Strategies: Two General Approaches

1. Survey or ask people questions about the variable under study (AKA: “Self Report Research”).
 - Such an approach is most appropriate when the variable is **difficult to observe** and/or the **sample is large**.
 - ◆ For example, attitudes, feelings, opinions of a group of any size, or the behaviors of a vary large population.
2. Directly observe the variable
 - This approach is most appropriate when the variable can be reliably observed and/or the population sample is small.
 - ◆ For example, the physical aggression or on-task behavior of the students in a specific type of classroom.

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Two Types of Surveys

1. Questionnaires
 - An efficient method
 - ◆ Requires less time
 - ◆ Requires less \$
 - ◆ Allows access to more participants
2. Interviews
 - Face to face
 - ◆ More difficult and costly
 - Phone
 - ◆ Easier to sample from a larger geographic area.

◆ What are some of the challenges to result validity presented by the different types of surveys?

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Questionnaires

◆ Most appropriate when ...

- The number of variables to be assessed is small.
- The population to be sampled is large.
- The variables are hard to observe.

◆ What are some examples of this type of research question?

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Constructing Questionnaires

◆ State the problem for participants.

- Convince them that it is worth their time to respond.

◆ Attempt to make the questionnaire attractive, brief, and easy to respond to.

◆ Be selective.

- Make sure each and every item on the questionnaire has an important purpose.

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Questionnaire Item Types

◆ Closed-ended

- Best used when the variable under study is well defined and clearly understood by both researcher and respondents (e.g., knowledge of autism).
 - ◆ Scale
 - ◆ Rank
 - ◆ Checklist

◆ Open-ended (Free response)

- Best used when the variable understudy is not well understood by the researcher (e.g., types of school crisis response team trainin).
 - ◆ Data is more difficulty to analyze
 - ◆ Requires a coding system
 - ◆ Can yield unexpected results

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Sample Questionnaire Items

(Gay et al., 2006, p. 166)

Demographic Information (closed-ended)

1. Gender: Male _____ Female _____
2. Years Teaching _____

Checklist (closed-ended)

Below is a list of educational resources. Put a check in front of each resource you think is adequately available in your school

_____ up-to-date textbooks

_____ VCRs

_____ computers

_____ games

_____ trade books

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Sample Questionnaire Items

(Gay et al., 2006, p. 166)

Likert Scale (closed-ended)

Following are a number of statements describing a school's curriculum. Read each statement and circle whether you *strongly agree (AS)*, *agree (A)*, are *uncertain (U)*, or *strongly disagree (SD)* that it describes your school.

My school curriculum...				
is up-to-date	SA	A	U	SD
emphasizes outcomes more complex than memory	SA	A	U	SD
Is familiar to all teachers	SA	A	U	SD
Is followed by most teachers	SA	A	U	SD
Can be adapted to meet student needs	SA	A	U	SD

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Sample Questionnaire Items

(Gay et al., 2006, p. 166)

Free Response

14. Write a brief explanation of why you feel as you do about the quality of teaching in your school.

15. Please make any additional comments you have about this topic.

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Additional Questionnaire Construction Issues

- ◆ Make sure each item asks only one question. Be specific!
- ◆ Avoid vague terms or jargon.
 - Are there situations wherein use of such would be appropriate?
- ◆ Ensure it looks as professional as possible. This includes how the questionnaire is packaged (e.g., stuffed into envelopes).

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Additional Questionnaire Construction Issues

- ◆ Pilot test all questionnaires with all subgroups of the population to be sampled.
- ◆ Issues pilot testing considers include...
 - Questionnaire readability
 - The use of jargon
 - Time to complete
 - Others???

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Always Include a Cover Letter

- ◆ The letter should ...
 - be personal (if possible).
 - be brief.
 - stress the nature and importance of the study.
 - identify your affiliation and endorsements.
 - ◆ Including your advisor (name drop!)
 - as appropriate assure the anonymity/confidentiality of the responses.
 - specify the deadline for questionnaire return.
 - ◆ Not to long (about 2 weeks)
 - be personally signed.

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Questionnaire Follow-up

- ◆ Include a return post card (that is separate) from the questionnaire that will allow respondents to identify that they have responded, but not allow their names to be attached to the questionnaire.
 - Can be used for a prize drawing.
- ◆ Short of 100%, never be satisfied with your return rate.
- ◆ As a standard practice, send out a second set of questionnaires.
 - Doing so typically increases return rate by about 20%.
- ◆ Interview a random sample of non-responders to determine if they systematically differ on variables important to your study.
 - Who didn't respond and what were there reasons?

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Selecting Participants

- ◆ The entire population
- ◆ Simple random sampling
- ◆ Stratified random sampling
- ◆ Cluster sampling (random selection of groups)
- ◆ Systematic Sampling (selection of every #th person from a list)
- ◆ Non-random Sampling (e.g., convenience, quota)

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Survey Distribution

- ◆ Snail-Mail
 - Strengths: anonymous, easy to score, standardized
 - Weaknesses: response rate, requires reading skills, subjective interpretation of survey items, requires a mailing address.
- ◆ E-Mail
 - Strengths: inexpensive, speed.
 - Weaknesses: requires an e-mail address, could get multiple replies from a single participant.
- ◆ Telephone
 - Strengths: high response rate, speed, over comes geographical limitations.
 - Weaknesses: requires a phone, interviewers need to be trained.

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Survey Distribution

- ◆ Personal Administration
 - Strengths: efficient when respondents are geographically close to each other.
 - Weaknesses: training required, time consuming.
- ◆ Interview
 - Strengths: return rate, allows for probing, may be recorded.
 - Weaknesses: time consuming, not anonymous, interviewer bias, training required, complex scoring of open ended questions.

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Interviews

- ◆ Most appropriate when ...
 - the number of variables is large.
 - the population/sample is small.
 - the variables are hard to observe.
- ◆ For example????

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Interview Development

1. Structured
 - Protocol is identical for all participants.
2. Semi-Structured
 - A core of similar questions, but variations are allowed.
3. Unstructured
 - Depth interviewing, focus groups.

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Interview Development

- ◆ Closed questions
- ◆ Open ended questions
- ◆ Training
 - Pilot, tape record, practice

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Interview Data Collection

- ◆ Establish rapport.
- ◆ Be sensitive to interviewer bias.
 - Especially if there is a hypothesis and the researcher is interviewer.
- ◆ Face-to-face vs. phone interviews.
 - Number of participants, access to a phone, non-verbal data.
- ◆ Note taking vs. tape recording.
 - I recommend tape recording as with time participants get used to the tape recorder and it frees the interviewer to focus on all data sources (including non-verbal communication).

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Observational Studies

- ◆ Most appropriate when ...
 - the variables can be directly observed.
- ◆ Behavioral descriptions are very important to such research.
- ◆ Reliability of data is a concern.
 - How is this issue addressed?

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Collecting Observational Data

- ◆ Frequency counts
- ◆ Duration data
- ◆ Time sampling
- ◆ Content analysis

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Summary: Types of Descriptive Studies

<p>1. Direct Observation Variables (external) can be directly viewed</p>	<p>2. Surveying Variables (internal) that can't be directly observed</p>		
<p>↓</p>	<p>├── Interview</p> <p>└── Questionnaire</p>		
<p>Frequency count Duration Time sampling Content analysis</p>	<table border="1"> <tr> <td style="vertical-align: top;"> <p>Face to face Phone Structured Semi-structured</p> </td> <td style="vertical-align: top;"> <p>Snail-mail E-mail Phone Personal admin.</p> </td> </tr> </table>	<p>Face to face Phone Structured Semi-structured</p>	<p>Snail-mail E-mail Phone Personal admin.</p>
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Summary: Factors Influencing Study Type

		Population/Sample Size	
		Small	Large
# of Variables	Small	1 Observation or Interview	2 Questionnaire (w/interview)
	Large	3 Interview	4 Interview then Questionnaire

1. Observation if the variables are external, interview if the variables are internal
2. Can support the questionnaire with interviews of selected respondents
3. Interview is the best choice
4. Use a focus group to identify themes and the develop questionnaire items.

Next Week

- ◆ Correlational Research
- ◆ Read *Educational Research* Chapter 9.
- ◆ Portfolio Element #6 Due: Mini-proposal 2

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Portfolio Activity # 6 Mini-proposal 2

- ◆ Students shall briefly describe a **correlational research** project relevant to one of their identified research topics.
- ◆ Chapter 9 will provide guidance necessary to complete this mini-proposal

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