

04_Designing the Study and Collecting Data Unit IV

Copied from: Science, Technology and Society,

Copied on: 06/22/22

Content Area: **Science**
Course(s):
Time Period: **Full Year**
Length: **10-12 weeks**
Status: **Published**

General Overview, Course Description or Course Philosophy

This course assesses the student's ability to recognize and understand the entire health research process. Students are expected to know how to conceptualize a research project and see it through to completion, including identifying a focused research question, choosing appropriate study designs, collecting data that will answer the question, basic understanding of data analysis, disseminating findings, and following research ethical principles and considerations.

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

- IRB review/approval is needed for a research study
- the population sampling process and recognize corresponding bias
- the process, purpose, and format of questionnaire design
- there are types of reliability and validity in the survey study
- there are a variety ways of collecting quantitative and qualitative data

CONTENT AREA STANDARDS

VHEL.9-12.9.4.12.H.6	Demonstrate use of the concepts, strategies, and systems for obtaining and conveying ideas and information to enhance communication.
VHEL.9-12.9.4.12.H.7	Locate, organize, and reference written information from various sources to communicate with others.
VHEL.9-12.9.4.12.H.8	Evaluate and use information resources to accomplish specific occupational tasks.
VHEL.9-12.9.4.12.H.9	Use correct grammar, punctuation, and terminology to write and edit documents.
VHEL.9-12.9.4.12.H.10	Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.

VHEL.9-12.9.4.12.H.11

Interpret verbal and nonverbal cues/behaviors to enhance communication.

VHEL.9-12.9.4.12.H.12

Apply active listening skills to obtain and clarify information.

RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

TECH.9.4.2.CI.2

Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).

TECH.9.4.2.CT

Critical Thinking and Problem-solving

TECH.9.4.2.CT.2

Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).

TECH.9.4.2.DC

Digital Citizenship

Brainstorming can create new, innovative ideas.

Different types of jobs require different knowledge and skills.

STUDENT LEARNING TARGETS

Declarative Knowledge

Students will understand that:

- Identify when and what type of IRB review/approval is needed for a research study
- Describe the population sampling process and recognize corresponding bias
- Recognize the process, purpose, and format of questionnaire design
- Explain types of reliability and validity in the survey study
- Know variety ways of collecting quantitative and qualitative data

Procedural Knowledge

Students will be able to:

- what type of IRB review/approval is needed for a research study
- the population sampling process and recognize corresponding bias
- the process, purpose, and format of questionnaire design
- the types of reliability and validity in the survey study

- the variety ways of collecting quantitative and qualitative data

EVIDENCE OF LEARNING

Formative Assessments

Required Activities:

- 1) Checkpoint questions
- 2) Comprehension of key terms
- 3) Completion of Study Guide
- 4) Chapter Quiz-test Questions

Summative Assessments

- Benchmarks – departmental benchmark given at the end of MP1, MP2, or MP3 & MP4 b(Semester Based Course)
- Alternative Assessments
 - Lab inquiries and investigations
 - Lab Practicals
 - Exploratory activities based on phenomenon
 - Gallery walks of student work
 - Creative Extension Projects
 - Build a model of a proposed solution
 - Let students design their own flashcards to test each other
 - Keynote presentations made by students on a topic
 - Portfolio

RESOURCES (Instructional, Supplemental, Intervention Materials)

INTERDISCIPLINARY CONNECTIONS

Data collection and analysis

Ethics

Historical research

Information writing

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

See link to Accommodations & Modifications document in course folder.