Introduction to the Research Culture

Chapter 1

The Importance of Knowing Research Methods

- We have become a research-based culture
- Research is the most important "stamp of approval" in our society
- Not all research is created equal
- **Where do you see research in your everyday life?**

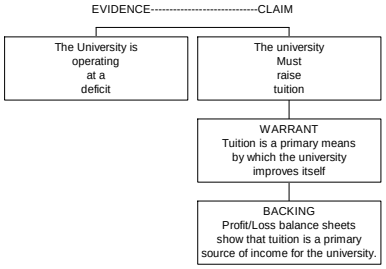
Making Claims, Offering Advice

- Everyone – researchers, ordinary citizens, politicians, educators, corporate executives, and snakeoil salespeople – makes **claims**
- **Claims** are assertions or conclusions
- Most claims are supported with some form of evidence or reason

- The validity of a claim is related to the validity of the evidence in its favor
- The validity of evidence depends on the situation
- The validity of a claim and the evidence depend on the validity of the **warrant** (another claim) that logically connects the claim and evidence

- Some evidence or backing must be given for the warrant as well
- The warrant is important because if it is not valid the argument advanced by the claim and evidence falls apart

Figure 1.2 A model of argument



- We will focus on understanding and evaluating claims, evidence, and warrants made by researchers about what people do, why they do it, what influences them to do it, and what effect it has
- Proper evaluation of research based arguments centers on refined critical thinking skills

A brief example

- Claim: Production pacing of an anti-drug ad leads to reduced attention in adult viewers
- Evidence: Heart rate decreases during viewing of fast-paced ads
- Warrant: Heart rate is positively correlated with attention

- Exercise: In your groups, identify two examples of research in your magazines. Identify the claim(s) being made and identify evidence in support of the claim(s). Finally, see if the warrant is explicitly identified. If not, what is the unstated warrant?

Everyday Ways of Knowing

- When we rely on knowledge that has not been questioned or tested, we rely on everyday ways of knowing
- There are five common everyday ways of knowing

- (1) **Personal Experience**: Experiencing something firsthand
  - Often trust personal experience more than generalizations
  - The exception does not negate the rule

- (2) **Intuition**: Believing something is true or false simply because it "makes sense"
  - Intuitive hunches may be right, but also wrong
  - Intuition is notoriously bad in relation to statistics
  - Intuition often results in mistaken perceptions and judgments because expectation can be biasing
  - **Cognitive conservatism**: Clinging to a belief in the face of contradictory evidence

- (3) **Authority**: Believing something because of our trust in the person who said it
  - Source credibility effects are pervasive
  - Authorities make mistakes

- (4a) **Appeals to tradition, custom:** Believing something simply because most people in a society assume it is true or because it has always been done that way
  - Some traditions/customs can be good (e.g., cuddling babies)
  - Some can be not so good (e.g., butter on a burn)

- (4b) **Appeals to faith**: Involves a belief that does not rest on logical proof or material evidence
  - Religious beliefs often require faith

- (5) **Magic, superstition, and mysticism**: When we use the word mystery to explain an otherwise unexplainable event
  - May have a scientific explanation
  - May have no foundation in science whatsoever

What are some examples of claims based on…

- Personal experience
- Intuition
- Authority
- Appeals to tradition, custom, or faith
- Magic, superstition, or mysticism

Why research?

- Research represents an alternative to everyday ways of knowing that, when conducted properly, leads to new and valid knowledge

The Research Process

- Research is "disciplined inquiry that involves studying something in a planned manner and reporting it so that other inquirers can potentially replicate the process if they choose" (Frey et al., 2000, p. 12)

Six Characteristics of Research

- (1) Research is based on curiosity and asking questions
  - Goal is to solve puzzling mysteries about human communication behavior
  - Methods are how we collect evidence to develop or test explanations

- (2) Research is a systematic process
  - step-by-step manner, ordered system of inquiry
  - ongoing cycle of five interrelated phases of research activities
  - "Figure" 1.3 provides a working model of communication research

The Research Process

- (a) Conceptualization
  - Forming an idea about what needs to be studied
  - Identifying a topic worth studying
  - Reviewing the relevant literature
  - Phrasing the topic as a formal research question or hypothesis (prediction)

- (b) Planning and designing research
  - Researchers need a systematic plan for conducting their research
  - Researchers must transform abstract concepts into operational or measurable terms
  - **Operationalization** determining the observable characteristics associated with a concept or variable

- (c) Choosing your methodology
  - Methodologies: experiments, surveys, textual analysis, and naturalistic inquiry (but we'll get to all of this!)
  - Must understand and adhere to the requirements of the particular methodology

- (d) Analyzing and interpreting data
  - Doing a statistical analysis (e.g., t-test, chi-square, structural equation modeling)
  - Making sense of your results

- (e) Reconceptualization
  - Connecting study results with previous findings
  - Setting the stage for future research

Characteristics of Research, cont.

- (3) Research is potentially replicable
  - Because research follows a systematic plan, other scholars can potentially replicate the entire inquiry process
  - "Potentially replicable" because scholars need to have the appropriate resources to replicate

- (4) Research is reflexive and self-critical
  - Researchers explicitly examine their methods to discover and report flaws or threats to validity (e.g., limitations)

- (5) Research is cumulative and self-correcting
  - Accumulation of information from research allows for knowledge to evolve and grow
  - Research thus leads to more research (kind of like tribbles)

- (6) Research is cyclical
  - Research proceeds in stages and ends up back where it started
  - New questions emerge from answers to previous questions

Research as Culture

- Research has its own language, rules, and social customs
  - All researchers do not share the same worldview or the same assumptions about how people and communication should be studied
  - Communication overlaps the three research cultures of (physical sciences, humanities, social sciences).

Two Paradigms

- Positivist (Scientific) is concerned with how to apply some of the methods used in the physical sciences to the study of human behavior
- Naturalistic (Interpretive) is concerned with the development of methods that capture the socially constructed and situated nature of human behavior

Key Differences

- **Ontological assumption:**
  - **Nature of reality, being, existence; why do we do what we do?**
    - Reality as singular and objective
    - Multiple realities
- **Epistemological assumption:**
  - **Nature of knowledge; how do we know what we know?**
    - Researcher is independent from research
    - Researcher is interdependent with research

- **Axiological assumption**:
  - Nature of values; what is the role of values in research?
    - value neutral
    - value-laden and biased
- **Methodological assumption:**
  - Nature of doing; what is the process of research?
    - deductive
    - inductive

Positivist (Scientific) tends to use Deduction

- Moves from general to specific
- Searches for *cause and effect*
- Uses a static design
- Uses a specific research procedure
- Conducted within a *researcher-controlled setting*
- Uses *quantitative methods* most often
- Collects data in the form of numbers
- Allows *context-free* generalizations to be made to *explain, predict, and control*

Naturalistic (Interpretive) tends to use Induction

- Moves from specific to general
- Tries to gain *holistic understanding*
- Uses an *emergent design*
- Relies mostly on *qualitative methods*
- Yields *context-bound* findings
- Provides a rich *understanding* of that social context

Back to Key Differences

- **Rhetorical assumption:**
  - Nature of communicating results; how do we share what we discover?
    - formal structure, often uses third person voice
    - informal structure, often uses first person voice

Scientific or Interpretive?

- A study of the effects of color versus black & white ads on recall of message claims
  - 200 college students with a questionnaire assessing free and cued recall
  - Focus groups with consumers asking them to describe which ads would be more memorable and why

Scientific or Interpretive?

- A study of the effect of billboard advertising on alcohol purchasing
  - In-depth interviews with 21 residents who live in areas of the city with high-density advertising
  - A survey of 200 residents from four communities with different densities of billboard advertising

Distinguishing Research from Pseudo-Research

- Multiple examples of pseudo-research or just plain fabricated research
- Can you think of examples?
- Competent consumers of research must be able to distinguish between good research and pseudo-research or bad research

Conclusion

- If we are to be knowledgeable and critical consumers of research, we must understand the research culture
  - assumptions about how the world works
  - methods employed to conduct research
  - rules of conduct to be followed
- Once we know the research culture, we will have a better chance of distinguishing valid from invalid information