

Active Learning in Survey Research Pedagogy: Strategies, Techniques, and Examples

Chase H. Harrison, Ph.D.
Harvard University




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Active and Participatory Learning

- Constructivist approach: Students construct their own understanding of content
- RCT's show improvement in retention, mastery, and enthusiasm
- Instructor role shifts from lecturer to leader (and content developer)
- “Classroom” spaces become more flexible: workshops, labs, projects, etc.



Conceptualizing Survey Research Instruction



Survey Research & Statistics

Statistics and Data are Complementary

This course teaches you how to understand the data that you hear about every day in the news and in other courses

This course will teach you how to understand where statistical data comes from and what is wrong (or right) with it

This course teaches you how to create data

Distinguishing Survey Data From Data *Big Data, etc.*”

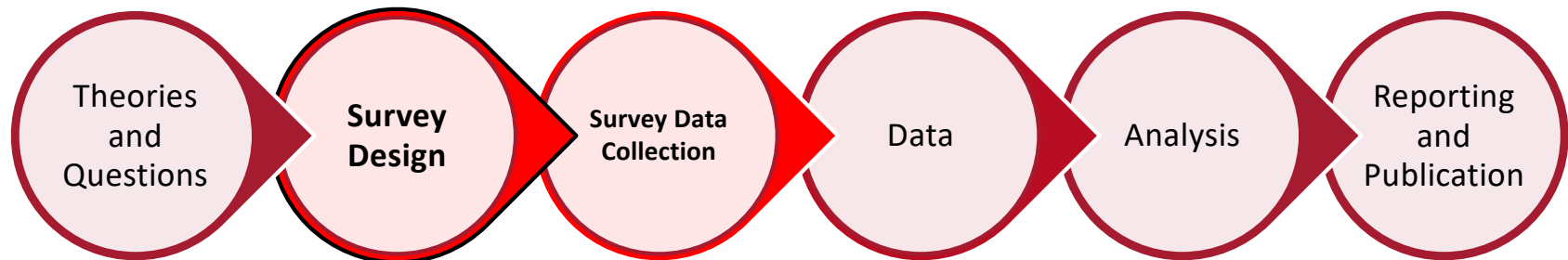
Structured, standardized data collection

- Measures designed for specific analytic uses
- Consistent equivalent measures
- Easily quantified and compared

Samples from well-defined frame

- Ability to understand specific population of inference
- Samples allow statistical projection with measurable or estimable precision

Social Science + Survey Methods + Statistics



Conceptual Approaches to Survey Research Instruction

Survey Error Focus

- Understanding sources of error in survey data
- Example text: *Survey Methodology* (Groves, et. al.)
- Focus on students as *consumers* of survey data

Survey Design Focus

- Steps to create survey
- Example Text: *Internet, Phone, Mail, and Mixed-Mode Surveys; The Tailored Design Method* (Dillman et. al.)
- Focus on students as producers of survey data

My teaching approach integrates both frameworks.



Teaching Survey Methods with Active Learning

Types of Students



- **Undergraduates**
 - Survey research / liberal arts (data literacy)
 - Survey methods + social science
 - Survey methods + statistics + data science
- **Applied Masters Students**
 - Policy, Public Health, Business, Agronomics, etc.
 - Students may have previous experience
 - May be working on projects for work or curriculum
- **Ph.D. Students**
 - Students who may collect survey data for dissertation
 - Students who will eventually design, direct, and commission large scale surveys



Strategies to Engage Students

- Review real-world examples of how data is used
- Tie usage to statistics
- Tie statistics to specific surveys
 - Discuss specific trade-offs in surveys and how they relate to specific statistics
- Assignments:
 - Survey critiques
 - Focus on survey in the news
 - Find published methodology (getting harder and harder)
 - Tie methodology to a facet, nuance, or problem of data

Common Examples for Surveys.....

| | |
|-----------------------|--|
| Population Statistics | <ul style="list-style-type: none">• Decennial Census• American Community Survey |
| Crime | <ul style="list-style-type: none">• National Crime Victimization Survey |
| Substance Use | <ul style="list-style-type: none">• National Survey of Drug Use and Health |
| Health | <ul style="list-style-type: none">• National Health Interview Survey |
| Energy Use | <ul style="list-style-type: none">• Residential Energy Consumption Survey |
| Employment | <ul style="list-style-type: none">• Current Population Survey• American Employer Survey |
| Health Care Costs | <ul style="list-style-type: none">• Medical Expenditure Panel Surveys |

A Classroom Example.....

[HOME U.S.](#)
[NEWS](#)
[MARKETS](#)
[INVESTING](#)
[TECH](#)
[MAKE IT](#)
[VIDEO](#)
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BREAKING: After-hours buzz: CRM, BOX, FIVE & more

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Obamacare brings record low for US health uninsured rate

[Dan Mangan](#) | @DanMangan
 Tuesday, 17 May 2016 11:02 AM ET

1K COMMENTS Join the Discussion

How low can Obamacare go?

Fewer than 1 in 10 Americans lacked health insurance in 2015, the first time ever in the nation's history that the uninsured rate has fallen so low, and a clear sign of Obamacare's impact.

Getty Images
 A woman sits with an insurance agent to pick an insurance health plan under the Affordable Care Act.

The U.S. uninsured rate fell to 9.1 percent last year, according to data released Tuesday by the federal Centers for Disease Control and Prevention.

It was the first time the percentage of people without some form of health coverage has gone into single digits, and a 2.4 percentage point drop from 2014.

MOST POPULAR

1. Trump in Mexico: Building a border wall is a sovereign right
2. Why the Fed probably won't like the jobs report Friday
3. Keep your powder dry as market downturn is coming, Pimco asset manager says
4. Op-Ed: Trump hit a home run with his meeting with Mexico's president
5. The No. 1 financial priority for Americans isn't investing

National Health Interview Survey

- Conducted annually since 1957 (48 years!)
- Rolling cross-sectional design
- Face-to-face interviews with households and non-institutional group quarters
 - One adult and one child at each household
 - Approximately 100,000 people in 40,000 households
- Baseline demographic core
- Topical questions about health





Case Study: Group Learning in a Semester-Long Class

Introduction to Survey Research Methods
(GOV 1010)



GOV 1010: Survey Research

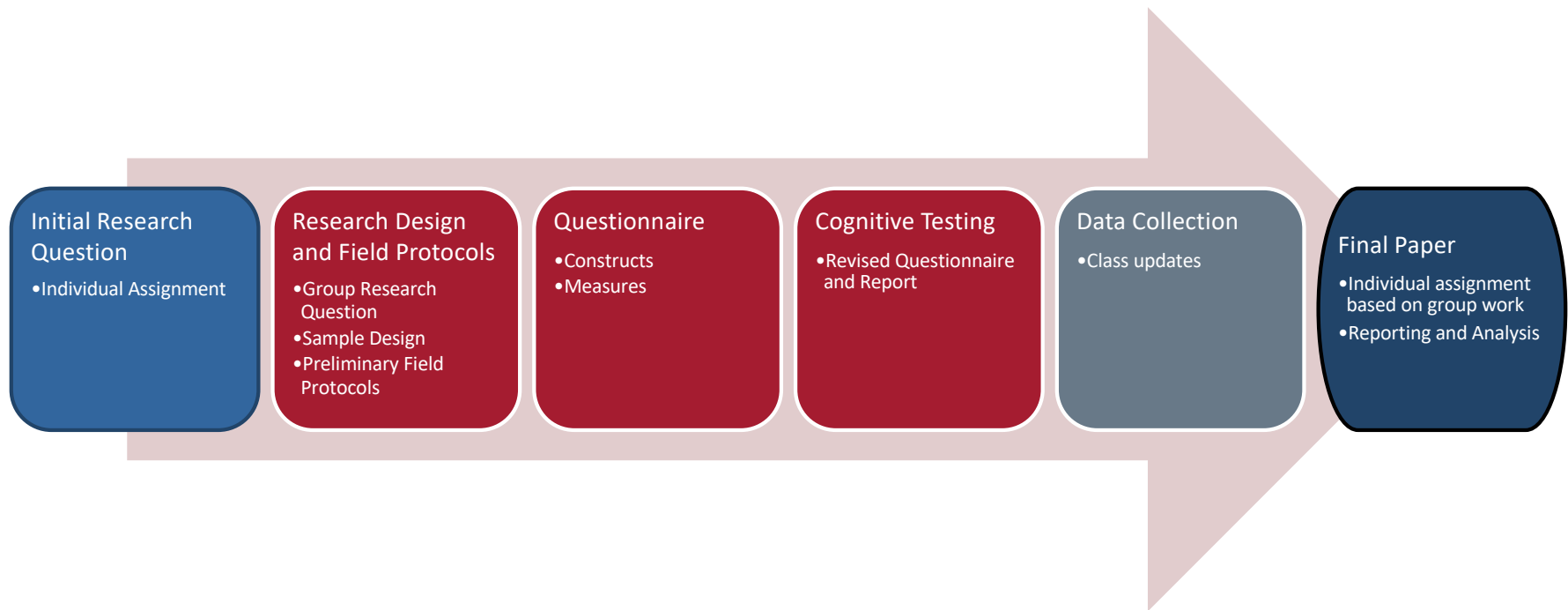
- Semester-long (14 week) course
- Mix of Statistics (40%), Social Science (40%) and other students
- Structured Classroom “lectures” (2 * 1.25 hours weekly)
- Regular meetings with group + Teaching Fellow
- Students complete original survey project in small groups
- Five (5) to six (6) students per group
- Final papers are written individually

Advantages of Group Learning

Mirrors actual survey work

- Helps students develop different skills:
 - Specialization
 - Delegation
 - Cooperation
 - Consensus





Assignment Flow: Introductory Survey Course (GOV 1010)

Challenges and Trade-Offs

Strong research topics versus topics interesting to students

- (Common choices: Food; Career interests; Athletes and Study; etc.)
- **Benefits:** Students are able to draw on rich understanding of familiar topics

Feasible populations versus generalizable populations

- (Harvard students \neq college students in general)
- Students *learn limitations* of population selection & *strategies to address*

Probability-based samples versus convenience samples

- Understanding probability samples is critical to course material
- M-Turk and Opt-In Polls require *very high bar* for use

Feasible or affordable methods versus strong methods

- Sample vendors generous, but materials have costs
- Inevitably, data collection requires a lot of repetitive work. *This is a teaching point!*

Friends versus similar interests versus diverse groups

- Personalities and free-riders sometimes need to be managed (Team Assessment Required)

Lessons Learned:

Assessment:

- **Focus:** Fully describing sources of error in survey, not perfect survey.
- Explain how things were not done right and potential impact on findings.

Groups:

- **Team formation:** Not commonly taught. Not intuitive.
- Specialization versus excellence; Delegation versus leadership.

Individual + Group Assessment:

- **Need Both:** (Final papers individually written).
- Peer evaluation of group performance is important. (5% of grade.)

Traditional Standardized Assessment (i.e. in-class exam).

- Helps increase comprehension of key terms.
- Final papers stronger with small final. (10% of grade)

Advanced Topics that Work Well

- **Multi-Mode and Mixed-Mode Surveys**
 - These approaches work well across all types of (good) field
 - Practical with students conducting surveys on campus
- **Non-response follow-up**
 - Creative strategies for follow-up
 - (Hand-written note + chocolate = 72% response rate!)
- **Estimating bias from imperfect frames and samples and field**
 - Thinking about comparable populations and comparable measures
 - Non-response bias studies required for low response rates

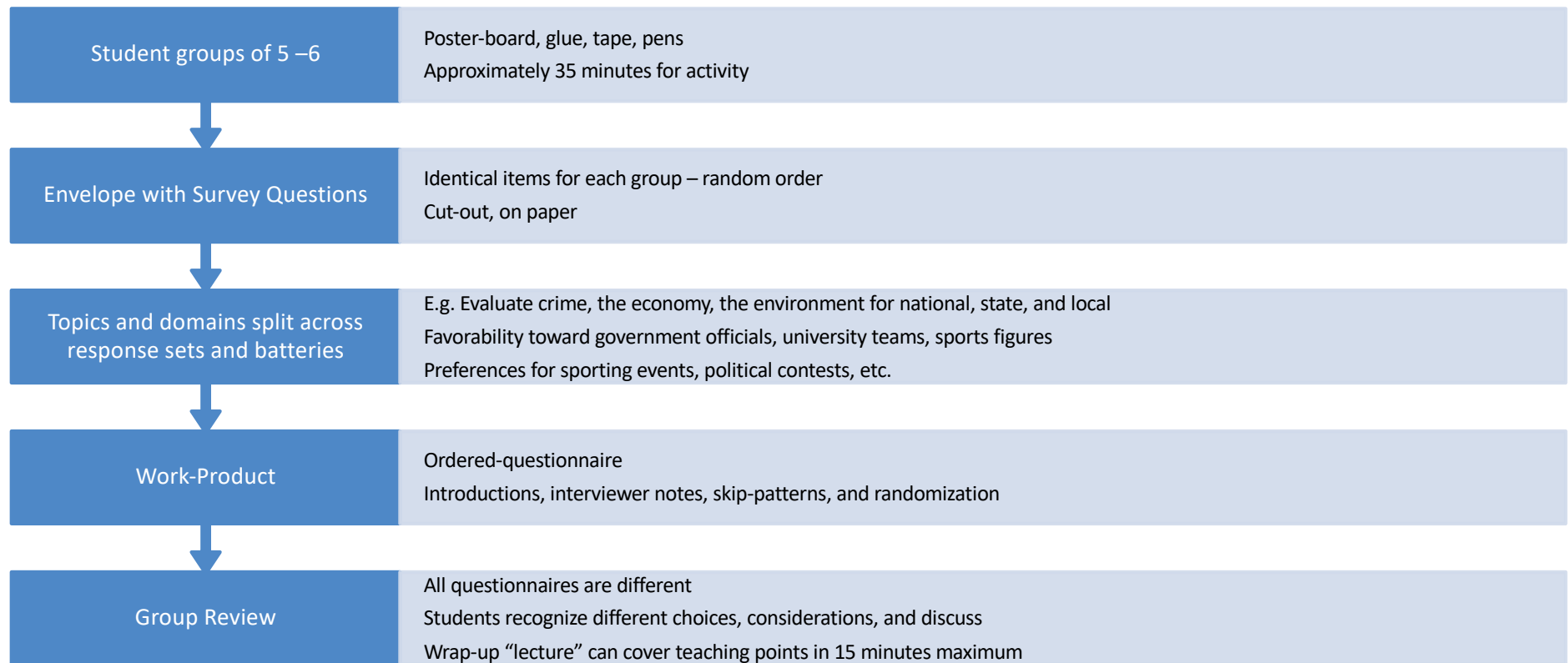


Incorporating Active Learning Into Classroom Projects

The background of the slide features several sets of thin, curved lines in shades of gray, some solid and some dashed, creating a sense of motion and depth. A dark red rectangular box with a small triangular pointer at the bottom is positioned on the left side, containing the title text.

Small Group and Active Activities

- Reading short news articles and designing testable hypotheses
- Sample design activities
- In-class surveys with response choice experiments (hypotheses and findings)
- Role playing and cognitive testing
- Identifying sources of data for different types of nonresponse bias analyses
- Non-response bias simulation



Example: Questionnaire Design & Question Order



Practica: Client Projects and Active Learning

Practica with Clients:

- Ideal for applied masters students
- Focus on students designing, administering, and analyzing a purpose-driven survey
 - Course-project
 - External client
 - Internal client – e.g. faculty project



Client Practica: Pros and Cons

Advantages:

- Realistic scenario – learning matches practice
- Challenges and trade-offs made clear
- Often comes with a budget and resources
- Excellent experience for job searches

Challenges:

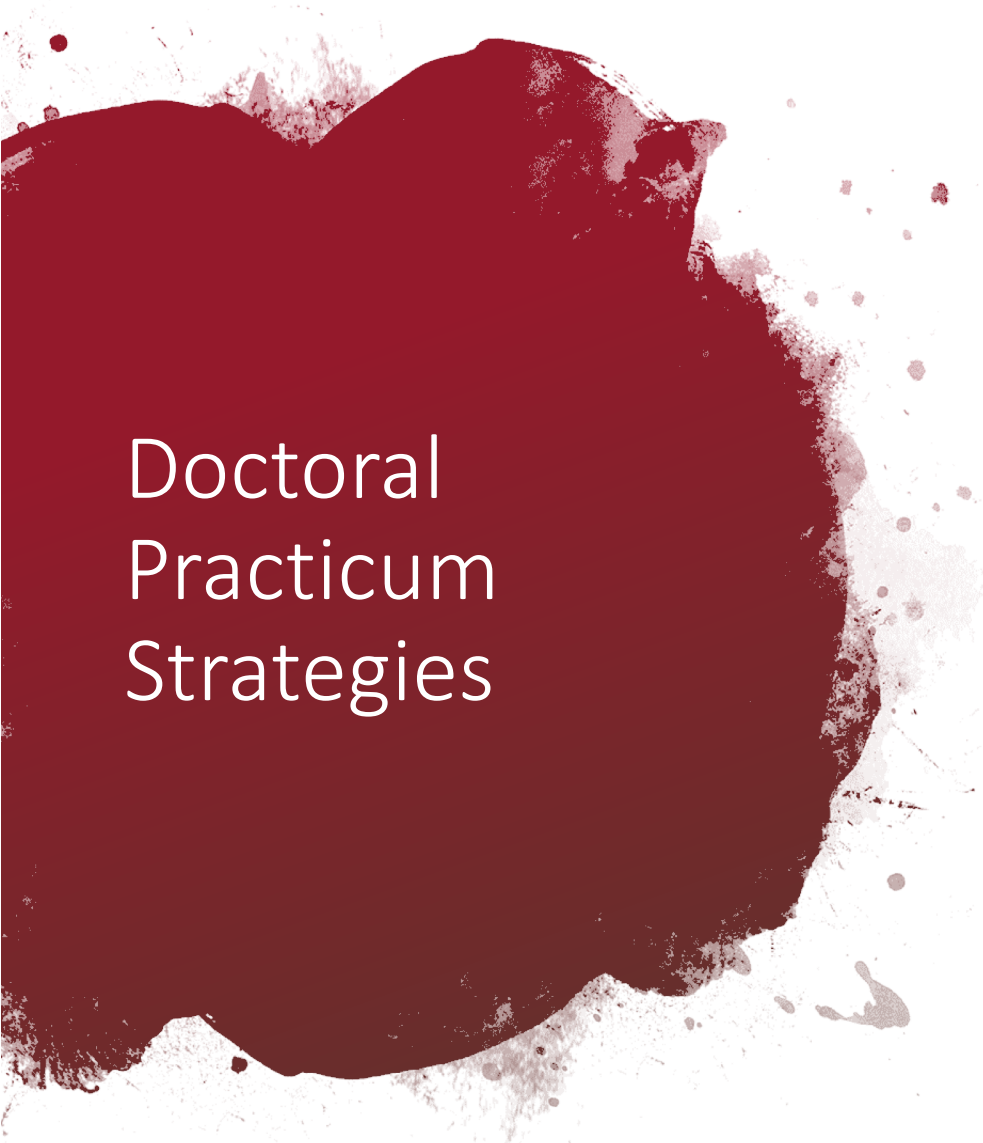
- Clients may be unrealistic
- Needs must match expectations
- Back-up support if things go wrong – Optimal if embedded in survey center
- Project timelines may not match student timelines

Practica to Support Advanced Learning

Case Study: Graduate Practicum in Survey
Research (GOV 2011)



- Offered annually
- Target Population: Doctoral Students and Post-Docs
 - Often MA, MPH, etc., and occasionally undergraduates with theses or similar
- 6 – 12 students
- Fields:
 - Social sciences (Government, Economics, Sociology, Psychology, etc.)
 - Public Policy
 - Public Health
 - Law
 - Design
 - Etc.



Doctoral Practicum Strategies

- Focus on actual student needs
- Covers substance of intro survey class
- Mostly research design for planned thesis projects and books
- Occasionally based on active fieldwork
- Wide approach of methods:
 - Non-probability samples
 - Surveys supplementing ethnographies
 - Large scale population surveys
 - Experimental modules in omnibus studies



Course Structure and Approach

- **Focused around design:**
 - Sample; Field; Questionnaire; Cognitive Testing
 - IRB review (either formal or similar) required
- Model final assignment is **grant proposal**
- **Peer-review** at each stage
 - Building professional skills to evaluate and critique
- Student responsible for **methods presentation** relevant to their work
 - Teaching students to develop a short methods lecture
 - Course covers somewhat different material each year

Summary

- Active and Participatory Learning are Natural Fit for Survey Methods
 - Group projects, classroom projects, client projects
 - Group and active assignments
 - Teaching leads to higher student engagement and higher performance
 - Requires change in instructor mindset
-
- Chase: *"The less I talk the more students learn"*



Thank you for your
time!



Chase H. Harrison, Ph.D.
charrison@gov.harvard.edu