

RES 500x: Survey Design in Interdisciplinary Environmental Research
Winter (Term 2), JAN-APRIL 2018, Tuesdays 2-5pm, AERL 107
Professor: Terre Satterfield

Survey research is increasingly popular among interdisciplinary environmental social and natural scientists. This seminar aims to harness that interest to develop survey design skills. It is best suited for graduate level and senior undergraduate level students who have either minimal training in survey methods or are transitioning from disciplines not normally acquainted with these. We will address survey design fundamentals such as: hypothesis development, structure and question order, problems of validity and reliability, the problem of behaviour and choice in design contexts, and sampling strategies for different lay and expert communities. A particular focus for design will be the subfields known as: environmental values, attitudes and beliefs; perceived environmental risks, meanings of landscape and place, and indices of social and cultural well-being. Theory and practice for developing scales or indices where none exist or where the design involves 'difficult to measure' phenomena will also be examined. Students will become familiar with and literate in practices pertaining to research ethics, including sensitivity to local norms, gender, power, data sharing and ownership. The course will be workshop intensive and thus is most suited for students who already have a particular research objective or topic mind, broadly stated. One key end goal for the seminar is a fully theorized and realized survey instrument that is largely ready for data collection or piloting.

Week 1: Introduction

January

- Expectations, Assignment and Workload
- Housekeeping on Schedule and Due Dates
- Basic Survey Design Principles
- Things We Will and Will Not Cover

Week 2: Designing Survey Amendable Research Questions

- From topic-to-idea-to actionable questions/hypotheses
- Open-ended v closed ended questions
- Good v poor questions and why
- Operationalizing research questions as independent, dependent and mediating variables

Readings:

Class Preparation:

Workshop: Writing and debriefing topic ideas

Week 3: Common Indices in Interdisciplinary Environmental Survey Research

- Environmental Values and Valuation

Ecosystem Services and Biodiversity Values
Environmental Attitudes and Beliefs
Measures of Perceived Risk
Measures of place attachment and value; cultural ecosystem services, relatedness and relational values

Week 4: Variation Across Environmental Survey Protocols

Experimental Survey Designs
Direct v Indirect Questions
Behavioural Measures – Reported, ‘Actual’ and Behaviour Change
Measures of Affect and Well Being
Choice and Choice Experiments
Deliberative Survey Designs (e.g., decision pathway designs)
Fractional replication scenarios in narrative or non-narrative forms

Workshop

Guest Begin Early?

Week 5: From Meaning to Measurement: Designing new measures and scales where none exist

Logics of scales, objectives and attributes
Subjective, Proxy and Natural Scales
Converting new or unmeasurable constructs to ‘measurable’ ones
Converting Proxy Measures or Analogs to Environmental Contexts
Knowing when problems of meaning cannot be surpassed and why

Week 6: Spatializing Value and Mapping Landscape Attributes

Map-based survey techniques
Mapping Physical v Intangible or Aspatial Attributes
Map-based weights and values
Anticipating, Managing and Respecting Measurement Resistance

Aesthetic value

Week 7: Structuring and Situating Surveys – Attribution, Design and Measurement Errors

Framing Effects
Order Effects
Measurement Errors: Validity and Reliability
Cause and Correlation
Upstream versus Mainstream Survey Contexts

Working with Information Tutorials

Workshop: Understanding passive v active framing techniques; addressing information protocols or tutorials

Week 8: Common Demographic, Social, Educational and Economic Variables and Indices

Explanatory v proxy effects
Age, Income and Education
Religion and Politics
Race and Gender
Inequality & Mobility

Week 9: Theorizing, Defending and Improving Your Design

Situating your ideas as a proposal
Revisiting Empirical Challenges in the Environmental Social Sciences
Defending survey approach as against other approaches
Linking your work to proximate fields in the natural and engineering sciences

Week 10: Ethical Considerations--Imagining and Respecting Your Surveyed Audience

Surveys as Phenomenological Moments
Researcher v Participant Benefits and Costs
Uncomfortable and Consequential Questions
Participant Critiques, Privacy Invasion
Threatening, Tense and Mute Topics
Expert Irritation
Data security and data sponsorship
Disclosing purpose of work and audience for work
UBC BREB Conditions

Week 11: Sampling your Target Population and Defending Your Data Collection Strategy

Target and convenience sampling
Representative v convenience sampling
Systematic Random Sampling
Weighted v Unweighted data
Panel Surveys

Week 12: Proposal and Design Presentation Group 1

Week 13: Proposal and Design Presentation Group 1

ASSIGNMENTS

1. Project Abstract and Propositional Statement (5%)
2. Analyses of scales or indices: Examining indices in your topic of study for quality, parametric v nonparametric results, interpretability, face-value validity, general v succinct, coercive v neutral ... (10%)
3. Linking Problem Statement, Hypothesis and Question Sets (using existing or tbd scales): *Complete a 1000 -2000 word statement of your core survey constructs and the measures or indices that come closest to your ideas, including those which exist as construct but are not otherwise developed.* (15%)
4. Brief literature review supporting your design expressed as several proven or testable claims (10%)
5. Short proposal draft (2-3 pages) (10%)
6. Survey Presentation (15%)
7. Final draft survey & proposal revised (25%)
8. Class Participation/Weekly Preparation (10%)

Readings

Floyd Fowler, Survey Research Methods

<http://methods.sagepub.com/book/survey-research-methods>