

SOSC2140: Research Methods in the Social Sciences

Spring 2019

Division of Social Science

The Hong Kong University of Science and Technology

Monday & Wednesday 10:30 to 11:50

Rm 2304, Lift 17-18

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OFFICE HOURS: Monday & Wednesday 13:30 to 15:00 (or by appointment)

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COURSE DESCRIPTION

This course offers a broad overview of principles of social science research design and methods. It is intended to provide an understanding of the major approaches in social science to research design, the collection and analysis of quantitative and qualitative data, and the specification and testing of theories. The course covers the logic of scientific inquiry and various research techniques such as experimentation, scientific sampling, survey research, field methods, archival data, and quantitative analysis that are commonly used by researchers in economics, education, political science, psychology, and sociology.

The course is intended to help students translate their general interests into a well-defined research question, specify a hypothesis, design a study to test it, and interpret the results to assess whether they support the hypothesis.

GOALS

By the time the course is complete, you should have a basic understanding of:

1. The relationship between theory, hypothesis, data collection, and analysis in the conduct of social science research;
2. Strengths and limitations of quantitative and qualitative approaches to social science research;

3. The most common methodologies for social science research, most notably ethnography, questionnaire-based surveys, analysis of secondary and administrative data, and archival research;
4. The criteria for claiming that an observed relationship is causal;
5. The basic features of experimental design;
6. Approaches to approximating an experimental design with observational data;
7. The professional and ethical issues that commonly arise in social science research;
8. Methods to critically consume social science research

COURSE FORMAT

This course will be taught in a blended/flipped format. Most of the lectures are already available online, and there will be assigned viewing each week. Students are expected to have completed viewing before class. Before each class, students will be asked to respond to prompts or suggest topics for detailed discussion at the Canvas site. Each week I will select some of the responses and topics to discuss in class.

The basic format of each class meeting will be as follows:

1. Introductory remarks. I will introduce the topics for that class and make some remarks. I may comment on recent developments.
2. Class discussion based on responses to prompts at the Canvas site. I will call on students to introduce the responses that they posted, and then will invite classmates to comment. I will also make remarks.
3. Group presentations. In almost every meeting of the class, groups will present their ideas for pieces of the research proposal and we will discuss and provide feedback.

TEXTBOOKS AND MATERIALS

Online Lectures

Some lectures are online (please see Canvas for information about registering to view the lectures):

https://learn.hkmooc.hk/courses/course-v1:HKUST+SOSCAPP+2018_Q2_R1/course/

The videos are also available at:

<https://www.coursera.org/learn/social-science-study-chinese-society>

<https://www.coursera.org/learn/social-science-research-chinese-society>

Recommended Textbooks (Optional)

Babbie, Earl. *The Practice of Social Research, International Edition 13th edition*.
Cengage Learning.

Note: The assigned readings in the schedule are based on the 13th edition. The 14th edition should be fine, but make sure that you are reading the correct chapter, in case the numbering differs.

ASSESSMENT

The assessments of the course will be composed of five parts.

- 20% - Short responses to prompts at the Canvas site in advance of class
- 15% - Research proposal – written
- 20% - Reading Report – written
- 25% - Group presentations
- 20% - Class participation

Short responses to prompts at the Canvas site (20%):

For every class, you will respond to prompts or post an idea for class discussion at Canvas website. This could be:

- Your responses to posted questions
- A question about the material in the assigned viewing for that week
- A link to a news article, journal article, or website relevant to our class for that day that you would like the class to discuss
- A suggestion for a specific topic for class discussion

Your response should be roughly 100-200 words. If you proposed a topic or a relevant material for discussion, you should offer some ideas, and briefly explain why it is relevant to the class.

I will review the prompts before class and call upon students to introduce their ideas for discussion. Please make sure to review your response before class in case I call on you. You are encouraged to read other students' responses at the Canvas site.

Research proposal – written (15%)

This is **teamwork**. We will split the class into **ten groups**. Students can choose their group members. The size of the groups will depend on the total enrollment. The groups should have a roughly equal number of students.

Please go to the following website to complete you group information:

<https://docs.google.com/spreadsheets/d/1PKRFsYalNA3lyS7Z7tIEAhXx6ARZIFHJyVJwuDo57K4/edit#gid=0>.

For your final project, you will produce a research proposal that reflects what you have learned in class about social science research design. The proposal should be for research that could be carried out assuming available of adequate funding. It should not be trivial. Nor should it be impossible, implausible, or require infinite resources.

Your research proposal should include the following parts:

1. Abstract. (150-200 words) Bring together the key points from all sections, written for non-experts.
2. Aims. (250 words) What is the overall goal? What is the question or problem you seek to address, and how will you go about conducting the study? This should be a roadmap explaining what you will actually do. This may incorporate key elements from Hypothesis, Data, and Methods. Whereas the abstract may be written in very general terms for a non-expert audience and may include elements from Research Significance, this can be more detailed and aimed at an expert audience.
3. Research Significance. (250 words) Why is the research important? Make the case that the research is worth doing. You may provide examples of major debates that results would influence, or social, economic or political problems that the results would help us understand. Imagine that you are making a pitch to a funding agency, and this is the part where you try to make the case that the research matters.
4. Background. (750 words) This should be a review of the relevant literature and a discussion of previous relevant studies. The background should make clear why your proposed research differs from previous studies and identify the gaps in the previous research that you seek to fill. Here you may provide more evidence related to points raised in Aims or Research Significance.
5. Hypothesis. (250 words) What specific question do you seek to address? What theory do you seek to test? What expectations do you have about patterns or relationships you will observe? This may be a formal specification of hypotheses, or if your study is more exploratory and descriptive, you may present this as a discussion of the trends, patterns, or relationships you hope to examine, and your expectations for what you will find.
6. Data. (500 words) Provide details on the data collection process, including site, time frame, target population, procedures for sampling/randomization/obtaining access. If you plan to make use of public datasets, or archival or administrative data, this is where you would introduce these data, and discuss their properties.

Make sure to explain why these data are the best suited for your proposed research.

7. Methods. (250 words) How do you plan to analyze the data? Make sure to discuss what types of relationships or other results would be consistent with confirming or refuting your hypotheses or expectations. Do not worry about the specifics about the quantitative methods since I don't expect you to have learned that yet.
8. References. There are no strict requirements for reference formatting. References can be in any style or format as long as the style is consistent. You can get more information at <https://libguides.ust.hk/basic-citation/how-to-cite>

Reading report – written (20%)

This is **individual work**. Each student needs to select one academic paper in his/her discipline. The paper should have been published in a major social science journal in 2010 or later. It should be an empirical piece, as opposed to a theoretical, opinion, or review piece. You read the paper and write a three-page reading report (A4 size, 1-inch margins, 12 point Times New Roman font, double spaced). The reading report should include:

1. Title and Author of the paper
2. Summary. In your own words, summarize the substantive ideas that the author is trying to convey to the reader. You should explain how each of the key elements of a research proposal was addressed in the study. What were the aims and significance, the hypotheses, the data and methods, and the conclusions? Not all published studies will have a clearly stated formal hypothesis, and you may instead discuss expectations for results laid out by the authors.
3. Personal Thoughts. The reading report should conclude with an assessment and critique of the study. Questions to be considered include whether the study's conclusions were supported by the evidence presented, whether other data or methods might have been appropriate, whether the study's focus was appropriate, or it should have taken a different angle, and what the ideal follow-up study should be. Discussion may also discuss whether claims about cause and effect made in the study are plausible. If there are problems with claims that a relationship is cause and effect, these should be described.

Class participation (20%)

We strongly believe that student participation can substantially enrich the learning experience for both the students and the instructor. In this spirit, class participation is encouraged. Effective class participation requires that you do the assigned readings before coming to class. You are encouraged to ask questions and to share with the class any relevant insights you may have from your experience or from previous exposure to these topics.

I will randomly call out 10 names at the beginning of every lecture. If your name is called out, but you fail to respond, you will be subject to a 1-point penalty for each absence. For any absence to be excused, documentation will be required.

Group presentations (25%)

Groups will make two group presentations of work in progress on the research proposal and one group presentation of the final proposal. The goal of these presentations will be for the group to outline their thinking on a specified piece of the research proposal in enough detail for subsequent class discussion to provide meaningful feedback. For the presentation, the group should introduce their preliminary ideas and plans related to the specified piece of the proposal, and we will have a discussion and provide feedback. Groups may revise slides and combine them for the final presentation of the research proposal. It is understood that these presentations will reflect work in progress and that may evolve in response to feedback.

Groups may decide among themselves how to allocate responsibility for making the presentations, with one or two members making one presentation, one or two making another, and so forth. Over the course of the three group presentations, however, each member should have roughly the same amount of time presenting. All group members should participate in preparation for each talk, by helping to gather and organize materials or prepare slides.

When one group is presenting, the other group will act as discussants, i.e. stopping and asking the presenters questions. Students need to submit the presentation slides through their email to the TA one day before the presentation. I will take a note of each group's performance (the extent of preparation, the clarification of the presentation, the Question and Answer session) to give fair grades.

GROUP PRESENTATION INSTRUCTIONS

Group Presentation 1: Aims and significance (15 min for presentation, 10 min for Q&A)

For their first presentation, groups will present their initial ideas for the aims and significance of their proposed research. Please review the suggested contents of the Aims and Significance sections specified above. Make sure to watch the assigned viewing 1.1, 1.4, 1.5 and 2.1 before developing this presentation.

In this presentation, each group should introduce the topic that they aim to study, explain why it is important, provide some ideas about how they will go about studying it, and suggest implications of different possible outcomes. The goal is for the group to convince the audience that they have a topic and that it is interesting and worthwhile, and then inspire discussion about how to refine it and develop plans to study it. The expectation is that the content will be preliminary and tentative.

The research topic should center on a question that has *not yet been answered* but which plausibly *could be answered* by empirical study. The focus is on knowledge discovery, either in terms of new facts about a phenomenon of interest or developing an understanding of a relationship or process involving different phenomenon. Examples of reasonable topics for a study might include an exploratory and descriptive study of an emerging phenomenon, or a more refined study that attempts to measure and help explain a relationship among social phenomena.

Research that isn't empirical is not appropriate as a topic for this class. For example, a philosophical assessment of whether something is good or bad that is based solely on reasoning from ideas about culture, norms, morality, and values, but which doesn't rely on evidence collected from the real world is not social science research by the standards of this class. Nor is a totally deductive approach that relies on mathematics, game theory, logic or reasoning from first principles to reach a conclusion. While such an approach to research might be completely appropriate in parts of some disciplines, it isn't what we seek to in our class, and relevant training is best pursued elsewhere.

For arguing significance, you may focus on academic and/or practical significance. If you want to argue academic significance, you will usually want to make the case that a deeper understanding of your specific topic may lead to a broader understanding of a topic of wider interest. Normally you will want to argue that whatever you are studying is an instance of a more common phenomenon of general interest, and that what you learn from your specific study will yield insight into that larger question. You may also want to argue that the specific situation you are studying is puzzling from an academic perspective in that there is some pattern or relationship that is not in line what expectations based on studies from other locations or times.

For practical significance, you may want to provide evidence that the phenomenon you are interested in new, growing in importance, or if it only affects a small number of people, still has disproportionate economic or other impacts.

Group Presentation 2: Data and Methods (15 min for presentation, 10 min for Q&A)

You will need to introduce the data and methods that you propose to use. If you propose to use an existing dataset, you will need to describe the features relevant to your study. If you propose to collect data, you will need to explain what sort of data you plan to collect, and how you plan to collect it. If you propose to do a survey, you will need to explain your sampling strategy, and core questions/modules included in your questionnaire. You need to discuss the potential ethics issues about your research if your proposed data collection will involve human subjects (e.g., potential risks of participating in your research) and discuss possible methods to protect the participants.

For methods, you are not expected to provide a detailed explanation of specific quantitative methods, since you are unlikely to have had previous coursework that would prepare you. Rather, you will want to focus on the relationships that you plan to examine, how you intend to address issues in 1.6, possibly by making use of approaches discussed in assigned viewing 1.7 and 2.5.

Before you introduce your data and methods, we need to briefly review the aim and significance of your study to refresh the memory of the audience. As with Presentation 1, it is recognized that you will be presenting work in progress, and we will discuss your ideas and provide feedback.

Group Presentation 3: Final Proposal (15 min for presentation and 10 min for Q &A)

Each team will present its final proposal. It should reflect changes made in response to feedback during earlier presentations. The presentation of the final proposal should be thought of as a ‘pitch’ to a funding agency, aimed at securing their financial support.

We will conduct a vote after the presentation of the final proposals and the team with the winning proposal will win a prize. The vote will not affect the grade, however.

ACADEMIC INTEGRITY

The written work you submit must be your own. Unattributed use of the work of others is plagiarism and is not acceptable. If you do feel the need to include text from another source, set

it off in quotes and include a proper citation. If you have any questions about how to attribute sources, how to use quotations, etc., ASK! The Office of the Provost offers resources to help you avoid plagiarism and copying. Please read the materials here: <http://tl.ust.hk/integrity/student-1.html>.

TOPICS AND READINGS/VIEWINGS

Week	Date	Topic	Readings/Viewings
1	30 Jan	Course Overview	
	04 Feb	What is Social Science? <ul style="list-style-type: none"> • What is scientific about social science? • The origins of social science • Differences between social science and other disciplines 	<i>Viewing</i> Part 1_Wk 1_What is social science <i>Reading</i> Babbie, Ch. 1, Pp. 3-26 (optional)
	06 Feb	No Class (Lunar New Year's Day)	
2	11 Feb	Designing a Study <ul style="list-style-type: none"> • Key steps in the design of a study • The elements of a research proposal 	<i>Viewing</i> Part 2_Wk 1_Designing a study
	13 Feb	Tutorial Session <ul style="list-style-type: none"> • Searching research literature and dataset effectively • Creating a reference list efficiently 	
3	18 Feb	The Big Questions <ul style="list-style-type: none"> • The big questions in social science research • China: Aging, migration, family, education, health 	<i>Viewing</i> Part 1_Wk 2_The big questions <i>Viewing</i> Part 1_Wk 3_Social Science Research on China <i>Group Presentation 1: Group 1</i>
	20 Feb	Inquiry, Theory, and Paradigms <ul style="list-style-type: none"> • Theory and paradigms • Well-known paradigms in the social sciences 	<i>Reading</i> Babbie, Ch. 3 <i>Group Presentation 1: Group 2</i>
4	25 Feb	Study Designs I <ul style="list-style-type: none"> • Theory and research hypothesis 	<i>Viewing</i> Part 1_Wk 5_Study designs _Video 5.1-5.3

		<ul style="list-style-type: none"> • Experiments & observational studies • Cross-sectional & longitudinal studies 	Group Presentation 1: Group 3
	27 Feb	<p>Study Designs II</p> <ul style="list-style-type: none"> • Quantitative & qualitative studies • Levels of analysis • Design a research project 	<p>Viewing Part 1_Wk 5_Study designs _Video 5.4-5.8</p> <p>Reading Babbie, Ch. 4 Pp. 97-105</p> <p>Group Presentation 1: Group 4</p>
5	04 Mar	<p>Challenges</p> <ul style="list-style-type: none"> • Representativeness • Selection bias • Omitted variables • Reverse causality • The ecological fallacy • Validity of measures 	<p>Viewing Part 1_Wk 6_Challenges</p> <p>Group Presentation 1: Group 5</p>
	06 Mar	<p>Cause and Effect I</p> <ul style="list-style-type: none"> • Types of association • Association and causality 	<p>Viewing “Correlation and causality” https://www.khanacademy.org/math/probability/scatterplots-a1/creating-interpreting-scatterplots/v/correlation-and-causality.</p> <p>Reading Alan Agresti Ch.10, Pp. 287-299.</p> <p>Group Presentation 1: Group 6</p>
6	11 Mar	<p>Cause and Effect II</p> <ul style="list-style-type: none"> • Experimental designs • Cause and effect in observational data • Control and treatment • Natural/quasi- experiments 	<p>Viewing Part 1_Wk 7_Causes and effect</p> <p>Group Presentation 1: Group 7</p>
	13 Mar	<p>Evidence and Data</p> <ul style="list-style-type: none"> • Survey data • Published statistics and aggregated data • Qualitative data • New sources 	<p>Viewing Part 2_Wk 2_Evidence Viewing Part 2_Wk 4_Public data for China</p> <p>Group Presentation 1: Group 8</p>

7	18 Mar	Sampling Design <ul style="list-style-type: none"> • Population and sample • Approaches to sampling • Sample size 	<i>Viewing</i> Part 2_Wk 3_Sampling_viedo 3.1-3.6 <i>Reading</i> Babbie Ch. 5 (optional) <i>Group Presentation 1: Group 9</i>
	20 Mar	From Concept to Measurement I <ul style="list-style-type: none"> • Concept and conceptualization • Three types of things we measured • Indicator and dimension 	<i>Reading</i> Babbie Ch. 6 Pp. 163-177 <i>Group Presentation 1: Group 10</i>
8	25 Mar	From concept to measurement II <ul style="list-style-type: none"> • Level of measurement • Criteria of measurement quality • Index and scales 	<i>Reading</i> Babbie Ch. 6 Pp. 177-194 <i>Group Presentation 2: Group 5</i>
	27 Mar	Surveys I <ul style="list-style-type: none"> • Questionnaire design 	<i>Reading</i> Babbie Ch 8 Pp. 229-242 <i>Group Presentation 2: Group 6</i>
9	01 Apr	Surveys II <ul style="list-style-type: none"> • Conduct questionnaire survey • Strength and weakness of survey research • New developments in survey data collection 	<i>Viewing</i> Part 2_Wk 3_Sampling_viedo 3.7-3.9 <i>Reading</i> Babbie Pp 242-267 <i>Group Presentation 2: Group 7</i>
	03 Apr	Experiments I <ul style="list-style-type: none"> • Topic appropriate for experiments • The classical experiment • Selecting subjects • Validity issues in experimental research 	<i>Reading</i> Babbie Ch. 9 Pp. 271-286 <i>Group Presentation 2: Group 8</i>
10	08 Apr	Experiments II <ul style="list-style-type: none"> • Alternative experimental settings • Experiments in the questionnaire survey • Strength and weakness of experimental method • Ethics issues in experiments 	<i>View</i> “5 Psychology Experiments You Couldn't Do Today” at https://www.youtube.com/watch?v=zZ3l1jgmYrY . <i>Reading</i> Babbie Ch. 9 Pp 287-291 <i>Group Presentation 2: Group 9</i>

	10 Apr	Analyzing Quantitative Data I <ul style="list-style-type: none"> • Univariate analysis • Tables • Graphs 	Viewing Part 2_Wk 5_ Quantitative analysis _ Video 5.1-5.2 Reading Babbie Ch. 14 Pp. 414-437 Group Presentation 2: Group 10
11	15 Apr	Analyzing Quantitative Data II <ul style="list-style-type: none"> • Correlation and Regression • Multiple Regression • Statistical significance • Type I and II errors 	Viewing Part 2_Wk 5_ Quantitative analysis _ Video 5.3-5.8 Group Presentation 2: Group 1
	17 Apr	Analyzing Qualitative Data <ul style="list-style-type: none"> • Linking theory and analysis • Qualitative data processing • Computer software for qualitative data analysis 	Reading Babbie Ch. 13 Group Presentation 2: Group 2
11	22 Apr	No Class (Mid-Term Break)	
	24 Apr	Consuming Social Research Wisely <ul style="list-style-type: none"> • Organizing a review of the literature • Critical reading social research 	Reading Babbie Pp. 498-511 Reading “Statistics for Policy Professionals: Things that you need to know.” https://gss.civilservice.gov.uk/wp-content/uploads/2018/05/Guidance-on-Statistics-for-Policy-Professionals-v1.0_FINAL.pdf Group Presentation 2: Group 3
12	29 Apr	Research Ethics and Professional Issues <ul style="list-style-type: none"> • Research ethics • Professional issues in social science research 	Viewing Part 2_Wk 5_ Research and professional ethics Group Presentation 2: Group 4
	01 May	No Class (Labor Day)	
13	06 May	Final Proposal Presentation	Group Presentation 3: Group 10-6
	08 May	Final Proposal Presentation	Group Presentation 3: Group 5-1