Student Resources Worksheets

# Designing Your Project

Use this worksheet, in conjunction with the recipe and student examples in the text, to help you with the various issues of the Research Design. Some of you will use the first part of this sheet (thesis-driven) and others will use the second (hypothesis-driven). The tasks are related as you have seen in Hannah’s and Kevin’s examples, but not identical, and you each only have to do one-half of this handout. Making progress on the worksheet and thinking through challenges are essential to writing the Research Design, and to get you started, I have provided Hannah’s and Kevin’s starting points. Any time you have difficulties on one part of this worksheet, skip the section and try to move on with the goal of returning to fill everything out at the end. Remember, although I presented the tasks to be completed in a linear fashion the order is arbitrary and the best researchers follow an iterative process in designing their projects. If you find yourself unproductively spinning your wheels on any element of the plan here, move to another task. Then, go back and see if that job seems easier. If you haven’t had a mental breakthrough, be sure to contact your instructor. Bring your worksheet and be ready to discuss your stumbling blocks. Please realize that the design phase, perhaps even more than the previous ones, requires a good deal of thinking, writing, and revising. I have never seen a good design result from a first draft of this worksheet. So, be ready to participate in that thinking–writing spiral and remember: Good writing and excellent design come from clear and careful thinking. Good luck!

***If you have a hypothesis, skip Part I and proceed to Part II***

Part I: Designing With a Thesis—The Courtroom Analogy

|  |  |
| --- | --- |
| **Prosecutor’s Argument:** The accused had the motive and the ability to commit the crime. The evidence will show that the accused committed the crime at the date, time, and place specified.**Hannah’s Thesis:** *In the case of mandatory juvenile life without parole, the Court been an important actor in a larger process of social change in which activists, experts, advocates, and politicians together (but not in a necessarily coordinated fashion) to change JLWOP. This reform is gradual and will be stable, as the Court has decided a variety of cases since 2000.* | **Your Argument/Thesis:**  |
| **Prosecutor’s Questions:** Who committed this crime? Why and How?**Hannah’s Research Question:** To what extent does the battle over eliminating the sentencing of juveniles to life without parole demonstrate the utility of courts in shaping social change in the United States? | **Your Research Question:** |

1. **Case selection**:

What is the instance (or instances) of the general phenomenon are you studying? Why is this an interesting and not simply an obvious case to investigate? (Why are these interesting and not simply obvious?) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Let’s look at Hannah’s answer (*except note: You might have confusion about the word “case” here because Hannah’s research is about the Supreme Court’s role and she is literally looking at Supreme Court cases over a period of time to determine how and why the justices ruled as they did. But, let’s imagine Max was pursuing a thesis explaining Russia’s intervention in Ukraine in 2013–2014. His case would be this recent Russian intervention of Ukraine, and he would be looking to identify the key events in the chain that led to the increased intervention. In other words, only in special circumstances, such as when someone is doing research on the law, will court cases be part of case selection.*)

Case Selection for Hannah, she writes: “To study whether the Court really does have positive, incremental effects on social change, I will study the recent attempts to reverse Juvenile Life Without Parole (JLWOP). Since the actions to undo JLWOP began in the early 2000s, I will examine the Supreme Court decisions on relevant cases since then. These include *Atkins v. Virginia* (2002), *Roper v*. *Simmons* (2004), *Kennedy v*. *Louisiana* (2008), *Graham v*. *Florida* (2010), *Miller v. Alabama* (2012), and *Montgomery* *v*. *Louisiana* (2016).”

1. **Thesis Breakdown (Operationalizing Your Claims)**:

Use the work you did on the TMH worksheet to plug in the information for the first column. Then, think through what you would be asserting in Columns 2 and 3. Check the TMH worksheet for insight resulting from Hannah, Putnam, and Enloe. Here, look to the key logic that underpins your preferred argument and break it down into its subclaims. Also note contentions of other schools that your approach seeks to refute.

|  |  |  |
| --- | --- | --- |
| Arguments | Actors and/or Concepts Involved | Motives, Principle, and/or Behaviors Asserted |
| Full Thesis: |  |  |
| Subsidiary Claim 1: |  |  |
| Subsidiary Claim 2: |  |  |
| Counter Claim 1: |  |  |

*Add or subtract rows to chart as needed*

**3. Claims, Key Assertions, and Sources**

|  |  |  |
| --- | --- | --- |
| Claims | What Is Asserted  | Sources of Such Data |
| Subsidiary Claim 1:  |  |  |
| Subsidiary Claim 2: |  |  |
| Counter Claim 1:  |  |  |

*Add or subtract rows to chart as needed*

Let’s look at part of Hannah’s RD to illustrate:

|  |  |  |
| --- | --- | --- |
| Claims | What Is Asserted  | Sources of Such Data |
| Subsidiary Claim 2: The Court reacts positively and in an incremental fashion to the evidence, popular desires, and legal reasoning that changes are warranted.  | 1. Court reacts positively (*is convinced)*\* and incrementally
	1. to the evidence (*from experts)*,
	2. popular desires,
	3. legal reasoning
 | 1. the opinions and analyses of opinions. That means must find the “right” or “important” decisions.
2. in the opinions, highlight Court’s logic. You have to show Court was aware of social science findings, public opinion, and legal arguments in favor of change
 |

\*The ultimate Court reaction is positive (a majority is convinced), so Hannah would be well-served to revise and make this contention the last part of the sub-point. Actually, she doesn’t need it because of the last phrase “that changes are warranted.” See revised claim below as we work through the example.

**Defend/Justify Data**:

|  |  |  |
| --- | --- | --- |
| Claims | Consider Quality (CRAAP) and Potential Biases of Sources | Ways to Triangulate (have confidence in reliability) |
| Subsidiary Claim 1: |  |  |
| Subsidiary Claim 2: |  |  |
| Counter Claim 1: |  |  |

*Add or subtract rows to chart as needed*

Again, using Hannah as example (with revised claim):

|  |  |  |
| --- | --- | --- |
| Claims | Consider Quality (CRAAP) and Potential Biases of Sources | Ways to Triangulate (have confidence in reliability) |
| Subsidiary Claim 2: The Court reacts incrementally to the evidence, popular desires, and legal reasoning that changes are warranted.  | Since key sources are the Supreme Court opinions, she is assured of extremely high quality on all five indicators: **C**urrency, **R**elevance, **A**uthority, **A**ccuracy, **P**urpose | To be sure she is identifying the “right” cases and understanding them properly, Hannah should consult secondary sources (scholarly and contemporaneous news analyses) to be sure. (Also, the Court cases themselves refer to previous important decisions.) |

**4. Questions to “Ask” Sources to See If the Claims Hold?**

To determine whether the subclaims hold, you might be able to interview actors or ask questions of people involved in the phenomenon. This is where you would design your instrument. Even if you cannot use live subjects, this exercise in question asking is a good one to help you determine what you are looking for within your documentary sources, as many materials will have more information than you need or is relevant to you. Here, remember that you seek both to avoid leading your respondents or your sources and to conscious of precisely what doing. (Imagine someone with an alternative perspective is reading over your shoulder as you are analyzing the information). You may want to consult an appropriate methodology textbook on survey or interview design for more insight.

Questions? (Include below)

*Hannah would include her list of questions here . . . .*

**Final Justification**

Based on charts above, this strategy and these sources are *valid* and *reliable* (using the precise definitions provided in our textbook) because

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*Note here: Hannah should also justify that she has found all of the “important” court cases since 2000, turning to what other experts say is important to justify her choices. Although she is studying the process of JLWOP reversal (i.e., her “case”), she has to be careful to find all the relevant legal opinions in order to avoid bias (as we discussed in the examples of hypothesis testing). To impress readers of the quality of her work, Hannah wants to make sure she has not ignored some Court decisions that contradict what she is arguing. This discussion is admittedly a bit confusing because Hannah is doing legal research and has to look at Supreme Court cases. We can think of Hannah’s Supreme Court cases as analogous to another person’s key events that lead to the development under investigation.*

1. **Comprehensive RD Chart**

Once you have walked through each of the earlier sections of this worksheet, filling out the final summary table that can serve as an outline/rough draft for your research design is easy. (While this last step might seem redundant, this exercise will help you clarify your earlier work and help ensure that you have thought carefully through each of the steps.)

|  |  |  |
| --- | --- | --- |
| Design Issue | Courtroom | Political Science  |
| **1. Case/Case Justification** | The precise case at issue which is an instance of a more general legal violation and makes assertions about what happened, why, how, and who is responsible. (The case is not a “slam dunk.” The Defense challenges this version of events and evidence.) | The political issue, event, or development you are seeking to explain. Specify here why the answer to this question is not obvious (and therefore you need to do this research). |
| **2. Claims** | Overall account (with logic) of who was responsible. Then, a stepwise discussion of how and why. | Your Claims: Identify the necessary subclaims that must add up to show your explanation is a “good” one. Also advance points (from your competing arguments) that you need to show are factually or logically wrong. |
| **3. Data Sources** | Where will the evidence come from to support each part of the case: motive, ability, placement at the scene of the crime? Prosecutor defends these as carefully collected, not biased. | Your Sources: written and other documentary evidence, all that are relevant to the particular assertions you are making. What makes you confident these help you evaluate your claim (are valid, the information you need) and are not biased? |
| **4. Instruments for Data Generation?** | Police reports, interviews of witnesses, searches for physical evidence. | Interview questionnaires, survey instruments. These have to be carefully constructed. Be sure to allot sufficient time. (Include an attachment if this is relevant to you.) |
| **5. Corresponding Methodology** | Methodical discussion of the logic and presentation of the evidence that lays out the understanding of what happened and links the accused to the crime with physical evidence. | Methodical discussion of the evidence regarding each of your claims. Assesses the extent to which your thesis accounts for what you have observed. Your discussion: |

***If you have a thesis, you are done (well, of course, revising and rethinking will be valuable) with the worksheet! Skip Part II; you are ready to write the RD.***

Part II: Designing With a Hypothesis—The Medical Science Analogy

|  |  |
| --- | --- |
| **Medical Hypothesis:** Among heart attack survivors, level of exercise affects the probability of heart attack recurrence, where those who exercise vigorously 3 times a week are at the lowest risk, those who exercise moderately daily will be at a higher risk than the first group and those who do virtually no exercise will be at greatest risk of all.**Kevin’s Hypothesis:** *In the Arab Spring of 2011, greater access to free media made the toppling of governments more likely*. | **Your Hypothesis:**  |
| **Medical Research Question:** What kind of exercise (if any) is most effective in helping heart attack survivors avoid another attack?**Kevin’s Research Question:** Why did Egypt’s regime fall to protestors in 2011 when Algeria’s did not, especially when both had resisted previous uprisings. | **Your Research Question:** |

1. **Case selection**:

What is your universe of cases? ­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Can/Should you sample? Here’s a guide to starting (see Table 7.2 for more insight from our students)

Sampling: Considering Variation and Control (in two steps)

|  |  |  |  |
| --- | --- | --- | --- |
| Dependent Variable | Varied Value | Step 1 to Control: Remember what the Alternative Independent Variables Are | Step 2 to Control: Find two cases that vary also on *independent variable* but hold value of alternative factor almost constant across the cases |
|  |  |  |  |

Given the need to both vary and control, do any cases look promising? If so, why? (How do they give you variation and control? Or, should you use the universe? Why or why not?

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1. **Operationalization and Data Sources**

Provide operational definitions for each of the variables in your model (adjust as appropriate to capture your model). The point here is to define these terms in ways that lead you to specific information that you need to find to know their values (see discussion of Kevin’s work, both the mixed and statistical versions). Then, write down ideas about information that you will need to know your variable. At first, you may have multiple indicators, but try to reduce that list down to at most three different indicators. Finally, look to see (Internet and library searching) if this information is available for the times and places you need it. If not, reconsider definition and scheme.

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Operational Definition  | Operationalization Schemes: Scholarly Examples/Brainstorm | Data Sources? |
| Indep. Var 1 |  |  |  |
| Indep. Var 2 (if necessary) |  |  |  |
| Dependent Variable |  |  |  |

Defend/justify your operational definitions and operationalization schemes

|  |  |  |
| --- | --- | --- |
| Variable | Why Valid? | Why Reliable? |
| Indep. Var 1 |  |  |
| Indep. Var 2 (if necessary) |  |  |
| Dependent Variable |  |  |

1. **Questionnaire/Data Creation Instrument**

For those of you who are embarking on uncovering your own data, unfortunately, I cannot provide you with a generic chart to aid you in your data creation. I can remind you, ***first,*** to do everything you need to earn the approval of your institution’s review board so that they can be sure you have conducted your research ethically. ***Second,*** for actually writing your instrument, please consult the appropriate methodology textbooks to help you design a survey, interview sheet, or other device for interrogating data (e.g., text for discourse analysis) and coming to a valid and reliable conclusion about your variable values. Be sure you take this step very seriously because a low-quality instrument will result in poor research. Good luck!

1. **Methodology**

Explain exactly how you are going to do your research. After you collect the information, what will you do with it? How will you make judgments about the hypothesis, through comparative cases? Discourse analysis? Statistical tests? Other? (For those of you pursuing more complex designs, a methodology textbook might be in order to help you.)

1. **Comprehensive RD Chart**

Once you have walked through each of the earlier sections of this worksheet, filling out the final summary table that can serve as an outline/rough draft for your research design is easy. (While this last step might seem redundant, this exercise will help you clarify your earlier work and help ensure that you have thought carefully through each of the steps.)

|  |  |  |
| --- | --- | --- |
| Design Issue | Medical Science | Political Science  |
| **1. Cases/Case Selection** | Individuals at risk of heart attack recurrence. Can we study all? And how do we study those we have meaningfully? (To study, we will find similar individuals and put them into three groups) | What are instances of the phenomenon you want to study? Specify here a set of *places, times, and situations* in which what you are interested is happening. |
| **a. *Variation:*** *Having different expectations of values, given current theoretical knowledge* | RELATED to the hypothesis: Individuals who exercise more **vigorously 3 times** a week will have ***lowest risk***, those with **moderate daily exercise** will have ***more risk than that***, but those who **do nothing** will be ***at most risk*** for recurrent heart attack. Thus, we vary the independent variable (level of exercise) and have informed guesses about what values on the dependent variable should result. Here we don’t know what the dependent variable will be, but since our hypothesis tells us that heart attack incidences should be different. If it isn’t, we have learned something important! | Find instances when the outcome is different or when the level/type of your cause is different. **Your Answer:** |
| **b. *Control***: *Keeping the other possible factors that can affect your phenomenon as constant as possible*  | Use your Literature Review: Smoking and diet also affect heart attack rates. Make sure individuals in study don’t smoke and aren’t vegetarians, *that is,* ***control*** *for smoking and diet.* | How do you keep those other factors that you identified in your literature review as constant as possible so that the effects you observe cannot be attributed to them? **Your Answer:** |
| **2. Operational Definitions/Operationalization** | Establish definitions for “moderate” and “vigorous” exercise.  | Finding ways to define and know the “values” of your concepts. Values can be qualitative, as well as quantitative. Many times, for us, they are relative—for example, very high, very low  |
| Operationalizing Independent Variable *Always* ***justify*** *your strategy by considering the* ***validity*** *and* ***reliability*** *of your way of knowing* | Give each group the specific exercise regimen.  | **Your Strategy:** |
| Operationalizing Dependent Variable*Remember* ***validity*** *and* ***reliability*** | Know the typical rate of recurrent heart attack for this population. | **Your Strategy:** |
| **3. Data Sources** | Tracing the heart attacks and health outcomes of members in the sample | **Your Sources:** |
| **4. Instruments for Data Generation?** | None needed | Interview questionnaires, survey instruments. These have to be carefully constructed. Be sure to allot sufficient time. **(Include an attachment if this is relevant to you.)** |
| **5. Large or Small N? Corresponding Methodology** | Large N. Calculate the difference of means. Is the rate of recurrence of heart attacks among the three groups significantly different and in the ways that we expect? | Qualitative studies, small N, that is, a few cases. For quantitative, must be large N or universe. Are you tracing the historical process? Are you analyzing the discourse? What are you doing in your study? **Your discussion:** |

***You are done (well, of course, revising and rethinking will be valuable) with the worksheet! Now, you are ready to write the RD.***