

P4 ... Draft #2 – Revised Intro + Data

1. Revise Your Introduction

- ✓ Using the feedback given to you, revise your introduction and definitions before you proceed with collecting or generating your data.
- ✓ Change the bottom portion of your heading from "Draft 1 -Introduction and Definitions" to "**Draft 2 - Introduction and Data Collection**".

2. Collect Your Data

Before you start to collect data, read pages 5-7 of the *Internal Assessment Project Writing Guide*.

How much is enough data? -- A single scatter plot should have at least 30 points but many solid projects have considerably more than that. If you are performing the Chi-Square Test of Independence you really don't know if a test will be valid until you calculate the expected values. The more the data you have, the higher your chance of the test being valid. Get more data than you think you will need. This also depends on the dimensions of your contingency table. The larger array, the more data you need. For a small 2 by 2 contingency table aim for 75 to 100. For larger tables, get even more.

Organize the Raw Data: Consolidate all of your raw, un-summarized, data into an organized and labeled table in either Google Sheets or Excel. There should be some logic to the organization (ie. alphabetical, numerical, by team, by country, etc). *This will be different if you are doing a survey. In that case you will show the information in the order that it was collected.*

How to handle large data sets with 5 or more pages of data—If needed, you can try to include a double column of data in your tables. This might work if the font size is smaller, but don't go too small. Come for help on this if you are not sure.

Arrange the appearance of the Table in **presentation form** so it is ready, not only for Draft #2, but your final draft as well. Label all columns clearly with accurate descriptions. Do not write units next to each of your numbers in the table. Instead, include the units with your column labels. *If your data spills on to more than one sheet, be sure to repeat the headings at the top of each sheet and each column.* Be sure to provide at least a half-inch margin on all papers submitted for your project. This holds for your final draft as well.

If you will be placing your data at the end of your project, then label it something like "Appendix A – Data Tables". If you will include your data just after your introduction/data collection description, then just label it "Data Table".

You may include data that will not be used if it makes sense. Just be sure to clarify this later in Draft #2 when you describe your data collection process in detail. *For example if collecting birth rates for countries, perhaps not all countries have them listed.*

Later in your project, some of you will need to re-structure your data or calculate new information from your raw data. This depends on the project. This re-structuring can be handled by adding Appendix B with your updated table. Most likely this re-organizing for certain math processes happens later in the main body of your project, right before each math process. At that time, you can refer to Appendix B.

For those doing a survey: After revising the intro/survey from Draft #1, consider testing it out on your friends first before you go wild and give it to out to the masses. If you are handing out individual pieces of paper to your participants, then you keep all individual surveys and bring to Mr. Cedarlund when you submit draft #2. Remember that you need to make some effort to collect data that is representative of your population you are studying. Consider doing a systematic random sample or a cluster sample. Ask if you are unsure how to do this.

3. Does your data have quality?

The next section in your project is called “**Data Collection**” where you will describe your data collection process. This should provide the reader a vivid picture of where your data is came from and other pertinent (meaningful) details. Place this just after the Definitions section which you have already done. This section should be in past tense. In this section, you should detail:

- *The source(s) of your data, thoroughly described.*
- *The exact information you have collected, thoroughly described.*
- *The pertinent details involved in its collection including any decisions you had to make along the way (significant details). Include reasons/justifications for including or not including certain data or other decisions you had to make to end up the data that you have in your Table.*

Follow **pages 5-7 of the Writing Guide** for further guidelines. Top projects will clearly describe the sampling process used.

Official Comments from the May IB Director in regards to the May 2016 Projects:
"Many candidates did not describe the sampling process. Phrases such as 'I chose at random 50 participants' were often seen". More details are needed.

If you are having doubts about your project at this point, you should come to Mr. Cedarlund to discuss before proceeding.

Draft #2 Deadline (80 points)

Nov. 4 to 7 **Ideal turn in** (gives you more time for the rest of your project)
Wed Nov. 13th **Absolute deadline** (unless you have made arrangements with me ahead of time. ie. For those that are collecting primary data)

Also submit to [Turnitin.com](https://www.turnitin.com) as the 1st revision to Draft #1 by the same day.

Draft #2 should include the following three components:

1. Your revised **Introduction and Variable Definitions**. Have a classmate or friend read through it to be sure it reads smoothly and to check that you are using appropriate math terminology. (20 points).
2. **Data Collection** - The Description of your **Data Collection Process**. (20 points)
3. Present your **Appendix A - Data table** as if it was the final draft, in presentation form. If you have pages and pages of data, do your best to consolidate to as few sheets as possible as detailed earlier. (20 points)

For those doing a survey: As your project adviser, I need to see all of your surveys you have collected in addition to seeing the raw data list in your Draft #2. Bring it to me when you hand in the hardcopy of Draft #2. Later, for your final-draft, you will be required to submit one copy of a completed survey or a scan of one. Have this one completed survey already scanned into your draft #2 possibly just before or after your data collection descriptions. Don't throw away the surveys.

Digital submission of your data (20 points)

In addition to submitting a hard copy of your data, share your **Google Sheets** spreadsheet with Mr. Cedarlund or email your Data Table, in an attached spreadsheet (like *Numbers* or *Excel spreadsheet*) to cedarlund@4j.lane.edu. Do not send it in a Google Doc table or as a pdf.

Include your full name in the body of the spreadsheet document.

What's Next?

Once you receive your draft #2 feedback, use Packet P5 to help you write the rest of your project. Do your first planned math process within the first few days of receiving your feedback. This should give you momentum on the rest, and last, part of your project.