

Analysis plan for the final project

Due **Monday, November 17, 11:59pm** on Canvas in “Assignments” as **.pdf**

The “analysis plan” (actually a **design, measurement, and analysis** plan) contributes **25/100** points toward the final project.

It may be written all or mostly in outline, list, and/or table format; formal prose is not required (though prose discussion is welcome where helpful).

The analysis plan should include the following:

- (1) A brief summary of the current version of your **big-picture** research question and **measurable** research question(s)
- (2) Your experiment **materials**
 - (a) Present all the **items** to be analyzed, **organized** in a linguistically or conceptually relevant way.
 - If you are recording speakers, give a list of all the **stimuli** you will present to participants to record, or your **prompt(s)** if you are recording spontaneous speech.
 - If you are working from existing recordings (or analyzing spontaneous speech from your own recordings), give a description of the **criteria** you will use to select items to analyze.
 - Your experiment design probably includes multiple **conditions**. Explain these clearly and **organize** the stimuli/selection criteria accordingly.
 - Any properties that might **confound** your results should either be held constant or systematically varied (balanced) across items.
 - (b) If you are **recording speakers**, describe the participants’ **task**:
 - How will the stimuli be ordered during the experiment? (Randomly?)
 - How many repetitions will there be of each item? (At least 3 recommended if feasible.) How will they be ordered? (Consecutive, or random?) Will there be an extra repetition of each item to be used if needed?
 - Will the experiment items be presented in a frame sentence or in isolation?
 - Will there be any distractor items? If so, list them.
 - By what method will the experiment items be presented to the participants? Will they read items from a list, or will items be presented one at a time on slides, or...?
 - (c) If you are working with **existing recordings**, **describe** them:
 - What source are you getting them from?
 - What audio format are they?
 - Are you doing any kind of file conversion or other kinds of processing before you begin to analyze them?

- (3) Your **participants** (live or via existing recordings)
 - (a) Planned number of participants
 - (b) Explanation of different participant groups, if relevant
 - (c) Your plan for recruiting or finding participants, or selecting from recordings
- (4) Your plan for **acoustic analysis** of your recorded speech data
 - (a) For each stimulus item, what **acoustic properties** will you measure or classify? (formant frequencies, segment duration, VOT, f_0 , etc.)
 - (b) For each property in (a), what **landmarks** or **classification criteria** will you use? (You may wish to refer to published phonetic studies, either the one you used for your article report or something else, and follow what other researchers have done in analyzing similar classes of speech sounds.)
 - (c) As applicable for your project, read any relevant sections in the chapters on “Vowels” or “Consonants” in Thomas (2011; *Sociophonetics*; on reserve in the Undergraduate Library). Describe anything you will need to watch out for.
 - Reminder: **Use TextGrids** to mark the points or intervals that you plan to measure. This makes it easier for group members to work on the same sound files, or for you to revise your work later as needed. I may also **ask to see** your TextGrids when I am grading your project if anything unusual comes up.
- (5) Your planned total **number** of measurements, based on the previous questions: *items × repetitions × properties to measure × participants*
 - For example, measuring duration and f_0 would be **two** properties per item.
 - Exception: Any number of **formants** (1, 2, 3, ...) counts as **one** measurement per speech sound, because that is a single function in Praat.
 - Remember that you should plan for at least **100 measurements** per person in your group (minus a *few* is okay if you can’t get exactly 100 based on the factors you are multiplying together) — but be careful about going much higher than that unless you are already familiar with Praat scripting and plan to automate some of your measurements.
- (6) Your plan for **quantitative analysis** and **interpretation** of your acoustic results
 - (a) How will you use your measurements to **compare experiment conditions**?
 - What measured **quantities** will you compare between conditions?
 - What **averages** or other **calculations** do you plan to make?
 - What kind(s) of **data graphic(s)** will you use to display your results?
 - (b) How does this quantitative analysis (if all goes well) provide an **answer** to your measurable research question(s)?
 - (c) What will the **implications** be for your big-picture research question if your results come out one way or another?