SI 501: Constructing Affinity Walls
[Team Assignment]

Objectives

- To construct and develop an affinity wall out of affinity notes.
- To learn one type of qualitative data analysis.
- To analyze the qualitative data resulting from your interviews and any other relevant information from the client.
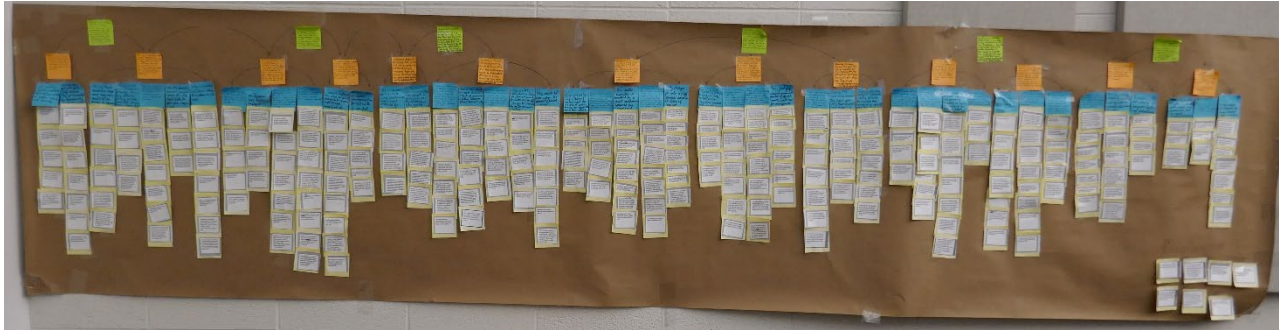
Overview

The graded portion of this assignment will be based on what your team presents in class on Nov. 8, 2021. However, the building of the affinity wall will need to happen in advance. Expect to spend between 6-12 hours with your team working on this assignment. You can start the affinity wall as soon as you have affinity notes from 3-4 interviews. Most teams, however, will probably need to reserve big chunks of time the weekend before the walkthrough (Nov. 6-7 this year). Schedule the time as soon as you can.

You will be using an online tool called Miro (miro.com). You should have received an invitation to the SI 501 Miro account sometime on Oct. 6 with the subject line, "Join the SI 501 (Fall 2021) team in Miro!" (Check your spam filter, if you can't find the email. Or, if you need another invitation, please email Kentaro [toyama@umich.edu] using your umich.edu account.) If you haven't already, follow the instructions to accept the invitation.

The Miro account we are using is an educational license. It's free for us, but it has some minor constraints: The class as a whole can only create 100 boards, permission settings are very limited, and there is no version control. Luckily, these are not big problems. However, please follow the following rules throughout the course:

- Only create boards *as a team*, and please do not create more than two boards per team. (There are 43 teams this semester.)

- When you create a board, please give it a title that begins with your team code. For example: "001X (Team ABC) – Big Client Affinity Wall" (If, for some reason, we need to delete boards, we will start with the ones that we cannot easily trace to a specific team.)

- Other than on Nov. 9 (when we will do "affinity wall walkthroughs" in class), please do *not* view at other team's boards unless you have the other team's prior permission. There's nothing fundamentally wrong with viewing another team's board (and it could be helpful to see how others are building their affinity walls), but we want to minimize the chance that anyone accidentally modifies/deletes elements of another team's board. So, just ask the other team's permission.

Your *end* goal is to produce something that looks like the following photograph from a previous SI 501 team – except this year, you will be creating it in Miro. The light yellow sticky notes at the bottom are individual affinity notes. Notice that they are hierarchically clustered. Several yellow notes form a group that is placed under a blue note; blue notes are grouped under pink notes (orange, in this case), and so on. When the affinity wall is completed, the top-level notes will indicate the most salient issues or issues types that emerge from the contextual inquiry process.

Creating and Populating the Initial Affinity Wall

1) Start with the spreadsheet in which your team has been recording affinity notes. You should have anywhere from 120 to 360 sticky notes, with 150-240 being typical in SI 501. (6 interviews x 60 minutes each x 1 affinity note for every 1-3 minutes = 120 to 360 affinity notes.)

2) Create a new column in the spreadsheet – we will fill that column with the actual text of the affinity notes you will add to Miro.
   o Assuming that you followed the instructions from the Interpretation Sessions assignment exactly, this will be Column D.
   o If your first affinity note is in Row 1, then type the spreadsheet formula below into Cell D1. Doing this will automatically append the user code from Column A onto the affinity note from Column B.
     • `=concatenate(A1,": ",B1)`
   o Copy the same formula in Column D for all rows in which you have affinity notes. (The spreadsheet will automatically adjust the row numbers, when you copy-and-paste the formula.) This should result in Column D containing all of your affinity notes, prefixed by the relevant user code.

3) Create a team Miro board by doing the following:
   o Have one team member go to miro.com and log in.
   o Click on "New board" (it should appear as a big blue icon with a "+" sign).
   o Choose "Stickies Packs" when prompted to "Choose a template." Click "Add" to create the board. You should now see six piles of colorful sticky notes.
   o Name your board by clicking on "Untitled" near the top-left (right next to "miro"), and editing "Untitled" to be your team's board name: You can name it whatever you want, but start with your team code, e.g., "001X." (Note that you do *not* need to click "Share" – just click outside the dialog box to return to the board.)
   o Scroll to a place that is a bit lower than the six piles of sticky notes.

4) Transfer your team's affinity notes from the spreadsheet to Miro, as follows:
   o Select all of the affinity notes from your spreadsheet (in Column D, if you've been following the guidelines exactly), and *copy* them (i.e., go to the Edit pull-down menu and select "Copy", or press Ctrl-C in Windows, or press Cmd-C on a Mac).
   o Paste them into the Miro board (i.e., press Ctrl-V in Windows, or press Cmd-V on a Mac). Each affinity note should now be its own yellow sticky note.
   o (Do the above any time you want to add new affinity notes.)

Analyzing Data via the Affinity Wall

Now for the fun part! The affinity notes are your raw data. The essence of almost all qualitative data analysis methodologies is the following: (1) Cluster related pieces of data; (2) Summarize the content of each cluster; (3) Repeat steps (1) and (2) hierarchically, until you have a small number of top-level conclusions. With affinity walls, you will be performing these steps in an intuitive, visual way. In the instructions below, we use the color convention recommended by Holtzblatt et al. (2005), but of course, the specific colors don't really matter.

1) Form clusters of notes out of those that contain related content by moving the notes around. All team members should do this simultaneously. Try to do this quickly without thinking *too* much – there's no one "right" way to create these clusters.
   o At the beginning, just put notes together whenever they seem at all related. But, don't get too attached to the clusters. Once you've read through all of the notes, you'll begin to get a better sense for what clusters should be formed. When this starts to happen, feel free to move notes around. Don't be afraid to break previous clusters.
   o Toward the end of the process (once most of the notes are in clusters), start looking for big clusters and small clusters:
     • If you see a cluster with more than 6-7 notes, try to see if you can break it up into two or more clusters with more granular content themes. (Sometimes, though, almost identical affinity notes might pile up, and if so, it's OK for a cluster to contain many more notes.)
     • If you have clusters with fewer than 3 notes, see if the notes could be merged with another cluster elsewhere.
     • At the end of this phase, you should have clusters of yellow sticky notes *most* of which are in clusters of 3-7 notes.
   o Sometimes, you might have single notes that just don't fit anywhere. You can create a "miscellaneous" cluster for these, but you should go back to it at the end, and see if any of them fit into the other clusters.
2) Add a blue note above each yellow-note cluster, with a one- or two-sentence summary of the notes in the cluster. *This step is usually what distinguishes a good analysis from a mediocre analysis, so it is worth doing well.* Guidelines:
   o ***USE COMPLETE SENTENCES!*** The blue notes should make assertions. They should not be just phrases or questions.
   o A blue-note summary should make sense on its own; it should be understandable without reference to any other notes.
   o When writing summaries, strive to find relevant patterns across the notes that are being summarized.
   o A good blue-note summary strikes a balance between generalization and precision. The summary should be broad enough that it captures the content of *all* of the affinity notes it represents, but it should be specific enough to be meaningful. For example, "Not everyone likes the existing communication process," might be true, but it's too vague. "There are differing opinions about the communication process, but managers seem to dislike it more than frontline employees," is more precise and therefore better (assuming that some of the notes it's summarizing support the statement, and none contradict it). Similarly, "Person X has an influence on the system's success" might be true, but it doesn't say what kind of influence. "The system succeeds more often when Person X is not overwhelmed with Y," is better because it's more precise.
   o However, blue-note summaries do *not* have to be works of fine literature – as long as it gets the point across, don't worry too much about how it's worded.

3) Once every cluster has a blue note, form the clusters into meta-clusters. Find blue notes that have related content, and move the whole blue-note-plus-yellow-note-clusters near one another to form meta-clusters.
   - This time, if you see a meta-cluster with more than 4-5 clusters, try to break it up into two or more meta-clusters with more granular content themes.
   - At the end, if you have any isolated, single clusters, see if that cluster could be merged with a meta-cluster elsewhere.
   - At the end of this phase, you should have meta-clusters most of which have 2-5 blue notes under them (with each blue note associated with a cluster of yellow notes).
4) Add a pink note above each blue-note meta-cluster, with a one- or two-sentence summary of the pink notes in the cluster. The same guidelines as for blue notes apply for pink notes.
5) If you have more than 6 pink notes after the previous step, repeat the process by forming pink-note meta-meta-clusters and adding green notes above them. Try to make the green notes summary statements, as with the blue and pink notes. However, sometimes, at this level, it's hard to write a summary – you may just end up with high-level themes. If so, write the theme as a phrase or keyword.
6) After you've completed all of the above, clean up the affinity wall a bit by spacing notes so that each one is visible, and arranging them so that the hierarchical structure of the affinity wall is clear. This will make it easier for the instructors to grade, and for the other students to understand your affinity wall when we do affinity wall walkthroughs.
   - Feel free to experiment with some of Miro's many features, if you think it will help clarify the structure of your affinity wall.
7) Make sure to "Download board backup," just in case anything goes wrong! (See instructions for this below.)
8) In Miro, please give everyone view access:
   - Click "Share" (at upper right of board), then set "Team access to board" to "Can view";
   - Also, set "Anyone with the link" to "Can view." (Then click "Copy board link" for the following step.)
9) Add your team's Miro link to this spreadsheet, in column C: http://j.mp/si501f21swap.

Additional Tips

- Although the affinity wall itself is easiest if you start after all of the interviews are completed and you have all of your affinity notes, you may not have time to wait until then. In practice, you can start an affinity wall any time after about half of your interviews are completed. Then, as you have more affinity notes, you can add them to the wall, by adding new affinity notes to existing clusters, or by creating new clusters. Of course, when you add additional notes, you may need to re-form clusters and write or rewrite higher-level notes.
- Based on past SI 501 teams, you should expect to spend 6-12 hours completing your affinity wall, with ~8 hours being typical. (It is strongly recommended that you schedule time for this with your team well in advance.) A few teams every year report that they would take as much 16 hours to finish their affinity wall, but it doesn't need to take that long.
  - The trick is to do the yellow-note clustering process very quickly. Keep it light and fun. There's little need to agonize about clustering decisions at this phase, as long as each cluster has *some* coherent logic.

- On the other hand, you should take some care in writing the summary notes. What makes some affinity-wall analyses better than others is the degree to which the summarizing notes are insightful. Good summarizing notes identify and clarify patterns in the notes underneath them. Writing these summaries is what requires intelligence in the affinity wall data-analysis process.

- Download and store local copies of your affinity wall every once in a while, just in case. We recommend that you do this at least at the end of every work session and also every 1-2 hours. Click the icon with the up-arrow at the top-left (to the right of your board title), and select "Download board backup."

    - If you ever want to revert to an old version, go to the main Miro page (where "All boards" are visible), and click on "Upload from backup" at the left, at the bottom of the list of options.

    - Be sure to respect the two-boards-only rule for each team when you do this by saving and deleting any boards you aren't using.

- Affinity walls are a generic tool for any kind of qualitative data analysis. They are not restricted to contextual inquiry, nor to user-centered design. The underlying data can come from different kinds of sources, not just interviews and observations. Any time you need to take a large amount of information, and need to make sense out of it – for understanding, for problem solving, for strategizing, etc. – you could use an affinity wall.

Submission

- Save your affinity wall as a "best quality" PDF file. In Miro:

    - Create a single large frame that fits around *all* of your affinity notes. The "frame" tool is the one that looks a little like a hash sign, #, at the left of the board (ninth from the top).

    - Select the export icon (the one with the up-arrow near the top-left, next to the board title), and select "Save as PDF."

    - **Select the "Best quality" option** and click "Export." *"Best quality" is very important, as otherwise, the text may not be legible.*

- Upload the PDF to Canvas / Assignments / Affinity Wall, before Lecture on Nov. 9.